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ABSTRACT

The study described evaluated the reach and impact of 25 Tele Pour Tous Television for Everybody) programs on water and related issues which were broadcast by the Ivorian Out of School Television (OSTV) project in April-December 1975. This report discusses the relevance of the topic as a theme for an adult education TV program series, describes and analyzes the development of the two series of broadcasts and one individual broadcast, and explains the research design and methodology which provided the data to make an assessment of the impact of the TV programs in terms of awareness, learning and behavior, or action. Findings indicate that, although the program reached a considerable audience and generated a high level of interest, certain obstacles exist which make implementation difficult, and interest declines over time. It is suggested that the impact of such programs would be enhanced by the active promotion by OSTV of local Tele-Clubs as nuclei for action; by more active cooperation by government agencies and private organizations concerned by the issues in the preparation and follow-up of OSTV programs; and by limiting the number of communal actions advocated and proposed in the programs. (JTG)

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The Impact of 25 Television Programs on "Water" Produced and Broadcast by the Ivorian Out-of-School Education Project

by

Frans Langlet

1976

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ABSTRACT

This report, which accompanies the volume published simultaneously "Visits to 23 Villages to Determine the Impact of the Water Series Produced by the Out-of-School TV Department", evaluates the reach and the impact of 25 TV programs on "water" and related issues, broadcast during the period April 1975 to December 1975.

In this report we first present the relevance of the topic of "water" as theme for an adult education TV program series. Secondly, we describe and analyze the development of the two series of broadcasts and one individual broadcast. Thirdly, we explain the research design and methodology which provided the data to make an assessment of the impact of the TV programs in terms of awareness, learning and behavior or action. The major conclusions of the report are summarised below:

1. The water programs reached a considerable audience varying from 3,500 to 31,200 spectators per program
2. The interest of the audience for the water programs was generally high. Some programs got even very high marks. But a decline of interest over time is also observed.
3. On the basis of available data, which are not completely representative for all TV schools or all TV for Everybody listening groups, we conclude that the programs reached the various social groups and categories in the villages. More

men than women, and more younger than older people attend the broadcasts. It is very likely that literate people are over-represented among the audience. This would indicate that the primary target group of the programs: the rural, illiterate mass, is not reached.

4. The water programs created awareness of problems related to water and of solutions for the issue of a safe water supply.
5. It is certain that people acquired new knowledge about health practices, and started implementing them. We also found a positive correlation between better understanding of the principles of a certain practice and its actual use.
6. A number of villages after watching one or several water programs started the process of well construction. Few villages had a well at the end of the program series. Most of the villages we know of, were waiting for the technicians to do the drilling.
7. The major obstacles to a real impact of the Water Series lie in the lack of local organisation, the lack of (access to) material and organisational resources, the lack of cooperation of the administrative authorities, the lack of communication support, and the strength of traditional customs and beliefs.
8. The effectiveness of the TV for Everybody programs could be improved by systematically attacking and "destroying" these obstacles. This could partly be achieved by a close collaboration between the Out-of-School Education Project and the extension, credit and technical services of the ministries and agencies

involved in rural development.

9. In order to enhance the impact of the TV for Everybody programs we recommend

- that the number of communal actions advocated and proposed in the TV programs be limited;
- that the ministries, agencies and private organisations concerned by the issues dealt with by the out-of-school TV programs cooperate more actively and efficiently in their preparation and follow-up;
- that the Out-of-School Education Department promotes actively the creation of local Telo-Clubs as a nucleus of development oriented actions.

PART I. INTRODUCTION

During the dry season in many villages of the Ivory Coast the supply of water becomes a big problem. The small rivers and sources which give water during the rainy season dry up almost completely. What remains are some holes with stagnant whitish murky water which the women are obliged to take for want of better. Also, the lack of water during the dry season forces many peasants to abandon the watering of their nursery plants which, consequently, die burned by the heat.

These are just two problems the lack of water is creating. There are many others which are more or less serious depending on the season and the region of the country:

- Women must walk miles for their water chores.
- Many (often dangerous) diseases are caused or carried by contaminated water.
- Supplementary expenses are made when the villagers, for want of better, buy water from water vendors.
- Quarrels between husband and wife develop, when the latter, too tired by the water chores, does not take good care of the fields and the household.
- The rural exodus of the youth increases because they are discouraged by the material and physical difficulties of the village life.

Water is not only essential for human beings, it is also indispensable for the growth of the crops and the animals. Without water

people, plants and animals die. Without safe, non-polluted water animals and human beings become ill. The lack of drinking water or the obstacles to an efficient and convenient supply of drinking water hinders a steady and smooth development and growth of the village and the country. The peasant weakened by diseases carried by the contaminated water hole, is less able to work efficiently and productively, plants in the nursery or on the fields grow less well and provide a lower than optimal production, cattle with intestinal diseases will be less efficient for animal traction, and their meat will be less apt for human consumption.

It is clear that the supply of safe water is of primordial importance for the economic as well as social development of the country. This is realised by the Ivorian Government which has started a massive program for equipping the country with more than 7000 drinking water sources (well drillings and pumps) between 1975 and 1980: the Programme d'Hydraulique Humain (in literal translation: Program of Human Hydraulics) (1).

In 1974 it was foreseen that by 1980 each village with more than 100 inhabitants would have a water supply for every 600 individuals. This plan requires an investment of a little less than 33 billion CFA Francs (US $160 million).

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(1) Ivory Coast does not stand alone in its concern for a safe rural water supply as is demonstrated by a recently published document of the World Bank.

The procedure of obtaining a well is as follows: The Autonomous Hydraulic Service of the Ministry of Planning asks the Sous-Préfets to draw up a list of villages in their department which need a modern well. After reception of these lists the Service plans a well drilling program per region taking into account the available equipment and the number of villages that have paid their contribution. Each village is required to contribute 150,000 CFA Francs (US $600) (2) while the Government pays the remaining 90 percent or so of the drilling costs. It also pays for the maintenance of the wells and the pumps. All the village contributions are deposited into the National Hydraulic Fund which obtains the rest of its budget through contributions of the Regional Funds for Rural Development (FRAR), of the National Lottery, and in particular through a special tax of one CFA Franc per cubic meter of water consumed in the urban areas.

Parallel to the well construction program, it was decided that a massive information and education campaign -under the auspices of the National Office of Rural Promotion (ONPR) (3)- on hygienic and sanitary measures and the use of drinking water would be organized. The basic idea of the campaign is to have the population at large understand how to protect their new wells against pollution and how to obtain and use clean

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(2) In case a normal drilling does not strike water and thus a more profound drilling is required, the village contribution is raised to 200,000 CFA Francs (US $800).

(3) See Appendix A with a list of the acronyms and non-English terms used in the text.

drinking water. The objective of the campaign is to change certain habits and attitudes which prevent the peasants from benefiting fully from the advantages of the new equipment.

The TV programs with which we will deal in this report are just one (and not the most important) element of the first phase (1975-1977) of this campaign called the Programme d'Education en Hygiène Sociale pour l'Emploi de l'Eau Potable (Educational Program for Social Hygiene and the Use of Drinking Water). During this phase the contents and the methods to be used are tested out in a limited geographical area (7 Sous-Préfectures in the North, the Center and the East). In the second phase (1977-1980) the program will be consolidated and extended to other regions.

It is clear that this educational program could not start immediately with instructions for protecting the well because the majority of the villages do not have a well yet (until May 1976 about 400 of the projected 7000 wells had been completed) and are completely dependent on the water-hole or the spring for their water supply. Moreover, many basic notions about water and its use are not common knowledge for the population. Therefore, it seemed necessary to start the educational program by explaining the principles of the water cycle, the dangers of polluted water, and the mechanisms by which water becomes contaminated and transmits diseases. A second step would show the means by which healthier water can be obtained (improvement of water sources, boiling water, water filtering), and how water pollution can be prevented. Several solutions for having drinking water (water filter, cistern, well, pumps) would be presented and discussed in the third phase.

At the end of 1975 the CRFR started the first phase of the program which is based on the active participation of the peasants. The villagers

among themselves designate one or two persons to participate in a training workshop for local animators(4). These peasant-animators transmit the information acquired during the seminar to the others. They will help the village community to discuss its health problems, and to take decision for individual and collective action for improving the sanitary situation of the village.

The CNPR plans to provide support material for the animation and the sensitization(5) action described above: pedagogical leaflets, picture books, flannel boards, and slide shows; and it wants to make use of local language radio programs and national TV programs for informing the population at large of the existence of the program and for supporting the field activities.

With respect to the media support in June 1974, the CNPR made a request to the Department of Out-of-School Education of the National ETV Project for the production of 6 TV programs on the various aspects of water to be broadcast especially to the rural adult population. In order to cover many more aspects of water, the Out-of-School Education Department proposed to produce and broadcast a series of about 20 programs, to be prepared in collaboration with the CNPR and other agencies.

In October 1974 a work group for the Water Project, as it was called,

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(4) Animators (French: animateurs) are local people who organise, stimulate and coordinate local development activities.

(5) Animation (French: animation) consists of organising and stimulating local development activities. Sensitization (French: sensibilisation) consists of creating awareness of certain problems and possible solutions.

4. 4.

was created to prepare the contents and the programming of this series of 30 minute TV programs. It proposed an initial list of 18 programs of which finally 13 were produced and broadcast. The first TV for Everybody program of the so-called Water Series was transmitted on April 9, 1975, and the last program of this series on June 6, 1975.

Already in the conception and the production stage of the first Water Series dealing with the basic problems of water and the basic principles of water pollution, there was thought and discussion about a possible second series which would emphasize the relationship between contaminated water and diseases. The second series was scheduled for the first quarter of the 1975-1976 school year. Its first broadcast (a rerun of the most successful film of the first series), was transmitted on October 22, 1975, while the last water program was shown on December 10, 1975. Altogether in the year 1975, 24 programs concerning "water" were broadcast. Adding one other water program, Why a Well?, shown on November 20, 1974, to this list of 24, there were a total of 25 TV for Everybody programs dealing with water and its problems during the first two operational years of the Ivorian Out-of-School Television(6).

These 25 programs will be the object of the present report. During the school years 1974-1975 and 1975-1976 the Evaluation Service of the Ivorian ETV Project (on behalf of the Academy for Educational Development, Inc. under contract with the United States Agency for International

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(6) See Appendix B for a complete list of the 25 programs and their objectives.

Development, and with assistance from the Institute for Communication Research of Stanford University) undertook several studies to measure the impact of these programs. As a matter of fact only the third study reported herein (see Section II.3) was carried out under the USAID-Ivory Coast Government agreement signed in May 1975. The first two studies had already been undertaken before the signing of this agreement. This explains the limited resources which were available for them. The methodology of the studies and their results will be reported here.

PART II. RESEARCH AND EVALUATION

1. The Research Objective

The Evaluation Service became involved in the preparation of the first Water Series right from the beginning in October 1974. At that moment a work group was set up, the members of which were representatives of all the ministries, and Government agencies interested in questions directly or indirectly related to water and its problems (see Appendix C for a complete list of the participants). The objective of the work group was to prepare the programming of a series of about 20 programs aimed at:

1. making the out-of-school audience aware of the water problems in their own region as well as elsewhere;
2. providing knowledge of some basic scientific concepts and facts for understanding the relationship between contaminated water and diseases (microbes);
3. giving elements of a solution for a safer water supply, and inciting to action.

During our participation in the work group we had interviews with its most important members, like the CNFR, the INSP and the CNAD(7), and discussed with them the ways in which a possible evaluation study of the series could be undertaken.

It was thought that a series with rather specific objectives would lend itself to a field study of its impact. The classic model for such

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(7) See Appendix A.

a study is the true or quasi-experimental design using baseline data, varying the experimental factor (the treatment), holding constant other possible intervening variables, and using a control group. However, the realities of the Ivory Coast and the realities of the ETV system did not allow us to aim for such a design. First of all there was a severe limitation on the material and financial inputs for such an enterprise. Secondly it was almost impossible to isolate a control group which would not be exposed to the TV programs. Despite all the inherent limitations of a one-group-only study, it was decided that we go ahead with a three phase research: a pre-survey, a post-survey and a survey in between the two. The pre-survey was to be done before the beginning of the first Water Series, the second survey during the series and the post-survey after the series.

The main research objective was to find out whether improvements in the water situation of a village (on the individual as well on the communal level) occurred as a consequence of watching the TV for Everybody programs and of the discussions thereafter in the listening groups.

2. The Observer Network

How should the baseline data and the change measures be collected? In the study on the Out-of-School Television in Four Villages(8) the

(8) Stephen Grant: "Out-of-School Television in Four Villages. A Report on the First Experiment in Adult TV Education in Ivory Coast, 1973-1974". Abidjan: Service d'Evaluation, 1974.

creation of an Observer Network had been proposed which would operate in a representative sample of villages or listening groups in the whole country. This idea was followed up, and in December 1974 we started organizing the system. First of all we selected a list of the most active and motivated animators, villages and listening centers based on the feedback data of the first five broadcasts of the 1974-1975 TV for Everybo season. Fifty-six villages were selected on the basis of the number of feedback forms returned, the number of visitors per center, and a representative geographical spread over the country. We asked the animators in these 56 villages to designate an observer (a literate adult). After two months 40 observers had been designated, 26 of whom were teachers.

It is clear that the sample of 56 villages and the list of 40 observers were not completely representative for all the villages with TV schools in the country(9). At the moment of sampling we had only limited feedback data on 229 villages out of a total of 1110 TV school villages. However, as can be seen in Table 1 there was some correspondence between the geographical distribution of the sample and the final list of observers on the one hand and the sampling population and the TV school villages on the other.

(9) See Appendix D for a map of Ivory Coast and the location of the observer villages.

Table 1: Geographical distribution of TV schools, feedback villages, sample villages, and designated observers

Regional Education Directorate	Number of TV Schools		Number of Feedback Villages		Village Sample		Number of Observers Designated	
ABIDJAN (excl.: Primary Inspectorates of Abidjan and Bingerville)	448	40%	81	35%	18	32%	11	28%
BOUAKE (excl.: Primary Inspectorate of the town of Bouaké)	419	38%	94	41%	26	46%	19	48%
DALOA	184	17%	47	21%	7	13%	7	18%
KORHOGO	59	5%	7	3%	5	9%	3	8%
TOTAL	1110	100%	229	100%	56	100%	40	100%

In Appendix E we list all the 40 villages participating in the observer network indicating whether the observers sent back their three questionnaires and whether they were visited by the Evaluation Service either in 1974-1975 or in 1975-1976.

It was our purpose that the 40 observers observe closely the animation process before, during and after the TV for Everybody broadcasts; that they make an inventory of the socio-economic and cultural infrastructure of the village in order to relate this to the outcome of the animation, and that they follow carefully decisions and actions taken by the listening group in order to assess the impact of the TV programs. It goes without saying that such a program is rather ambitious, and it

becomes even more utopian considering the conditions under which we had to work. There was no money to organize a training seminar for the observers. A basic training in some methodological principles and in some research techniques could thus not be given. There was only one full-time person working on this project, and he was unable to visit the 40 villages scattered over the whole country. The only way to ensure somewhat the reliability of their observations was to provide them with an exhaustive description of the steps to be followed during the survey, and to create a rather simple observation instrument.

3. Data Sources

3.1. In February 1975 we sent off the first questionnaire which was to provide the baseline data: the socio-economic characteristics of the village, the number and types of crops and other agricultural resources, the water situation (water holes, springs, rivers, wells, running water), water related diseases and preventive measures. After two months of waiting (the postal system in the Ivory Coast works slowly: letters need sometimes three weeks to arrive at their destination) we had received back 37 completed questionnaires: a return rate of 93%, which is extremely high for this type of survey.

3.2. In April 1975, right after the start of the first Water Series, we sent out a second questionnaire to the 40 observers. Twenty-one of them returned it (53%), but only after we had sent them a reminder. In comparison with the first survey, this low return rate could be explai-

ned by various reasons. In the first place the months of May and June are not the best months to conduct a survey which depends on the contributions and the collaboration of school teachers. It is the end of the school year and the teachers are occupied by final exams of the pupils on the one hand, and many of them are sitting in on professional exams themselves. Therefore many of the observers did not have the time to complete the questionnaire which required somewhat more effort than the first one. In the second place we know from the reactions of the animators of the out-of-school discussion groups during the last quarter of the 1974-1975 year that their initial motivation had withered away because the expected payment for their voluntary services did not materialize. It is quite probable that the declining motivation of the animators had an effect on the willingness of the observers to fill out the forms we had sent.

The objective of the second survey was to know something more about the reasons why or why not the villagers come and watch TV for Everybody, to have a clearer idea of the procedures through which the audience is recruited, and to make an inventory of the composition of the audience. Elsewhere(10) is reported on the motivations of the audience and the notifying and recruitment procedures. These will be discussed from another perspective in the forthcoming report on the "animation process"(11).

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(10) Anthony Kaye and Frans Langlet: "A Report on Out-of-School Television in the Ivory Coast before and during its First Operational Year, 1974-1975". Abidjan: Service d'Evaluation, 1975.
Stephen Grant: Op.cit..

(11) Annie Benveniste: "Out-of-School Animation in Four Ivorian Villages" Stanford: Inst. for Communication Research (Forthcoming).

We will present the figures of the audience composition in Part III on the listening patterns of the two Water Series and the Why a Well? program.

3.3. In the original research schedule we had foreseen the post-survey to be conducted immediately after the first Water Series. But in the meantime the programming of this series got delayed, so that the last program of the series was only broadcast in the beginning of June 1975. This was not the time to solicit the collaboration of the animators or the observers. Besides, it was already decided that a second series on water and diseases was to be scheduled for the first term of the following school year. Therefore, it seemed much wiser to delay the post-questionnaire until the end of the second Water Series. The two series were built on each other. The second one assumed having been exposed and having understood the lessons of the first one. And a possible impact of the first series would be much more likely to show up after five to eight months instead of one to three months. There was an additional reason for postponing the third survey. A two and a half year contract between USAID and the Ivory Coast Government for the evaluation of the RTV System was signed in May 1975 which provided additional manpower (one expatriate and three Ivorian researchers) and financial and material research support to be available at the beginning of the 1975-1976 school year.

The low return rate of the second questionnaire and some doubt about the reliability of the data furnished so far by the observers and their animators-colleagues induced the decision to do a mail survey, like the two previous studies, as well as to undertake site visits. The mail

survey consisted of three parts: one part destined for the observer/animator (at this moment, November 1975, many teachers had changed school and villages, and we did not know very well who of the two, the animator or the observer, would be available to complete the questionnaire and do some interviewing) asking about the translation of the French sound track, the attendance of villagers at the water programs, the changes in the water situation and the water problems of the village, and the obstac for following up the lessons of the programs. A second part asked the observer to draw up a list of all the persons who attended a TV for Everybody session during a particular evening asking their names, their sex, their profession, their ethnic affiliation, their religion, whether they understood French, whether they had children in the primary school, and how many out-of-school TV programs they had seen during a certain period. These were the same questions we had asked in the second survey, and they were meant to provide a confirmation of the data of May 1975. In a third part of the survey we asked the observer to administer five individual questionnaires to five regular TV for Everybody viewers in order to test their knowledge of certain of the lessons shown on TV, and to find out whether these persons had adopted and applied any of the practices proposed in the series.

The third questionnaire was sent off in November 1975. The return(12)

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(12) As we noted, the unwillingness of the animator or observer to make the effort of completing and returning the questionnaire is very likely to be the major explanation for the low return. This hypothe is confirmed by the fact that of the 23 animators/observers visited in November and December 1975, only 16 returned their third survey material, while seven did not do this even after our personal visit during which we insisted on the importance of having the questionnair completed and sent back.

though higher than that of the second one, was still much lower than the return of the first survey- 60 percent versus 53 and 93 respectively.

Parallel to the third survey we visited 23 out of the 40 observer villages at the end of 1975 in order to obtain additional information on the animation process and the effects of the TV programs from the animator, and in order to have group interviews with a group of regular TV for Everybody viewers. The results of these interviews are reported elsewhere(13).

3.4. In addition to the studies of the Water Series we did some smaller studies which could shed light upon the impact of the TV programs, and the actions and obstacles to actions following a TV program on water. In collaboration with the CNAD the Evaluation Service prepared a report based on the feedback figures for the Why a Well? program of November 1974. This was followed by a follow-up study among those listening groups that immediately after the program had taken the decision to do something about the water situation in their village(14). In October 1975, we conducted a second follow-up study among all the listening groups of the original feedback group to know whether their initial decision had resulted in some concrete action or what the problems encountered were, and to know whether those groups that had not taken a decision immediately after the program, had taken one a year later, and why they had taken it or not.

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(13) Stephen Grant and Seya Pierre: "Visits to 23 Villages to Determine the Impact of the Water Series Produced by the Out-of-School TV Department". Abidjan: Service d'Evaluation, 1976.

(14) CNAD and Evaluation Service: "Rapport sur l'Emission "Pourquoi un Puits?", and "Dépouillement de l'Enquête de Follow-Up sur l'émission "Pourquoi un Puits?"". Abidjan, 1975.

A last source of data are the feedback figures. The feedback system was set up in 1974-1975 and was expanded and improved in 1975-1976. In 1974-1975 all schools with volunteering animators participated in the feedback system, in 1975-1976 a representative sample of animators was taken(15).

4. A Note on Reliability

We have some doubt about the reliability of the observers' answers, and in this section we give some examples where more scientific rigor is required in future studies. For example, in the first questionnaire we asked the observers to describe the material infrastructure of the village (dispensary, electricity, public wells, etc.). The correctness of these answers is relatively easy to check by comparing them with our own observations during the village visits, and with the census data of the Ministry of Planning. These comparisons reveal that in many cases the number of inhabitants and the number of wells are overstated. If indeed rather simple factual questions do not receive reliable answers, the more so for questions which allow the observer to give his own opinion.

The issue of reliability plays once more in case of the audience composition data collected by the observer during the second and the third surveys. During a particular TV for Everybody program he was supposed to draw up a list with names and certain characteristics of the listening group members of that evening. First, it must have been virtually

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(15) See also: Rudiger Fritz: "Le Public Atteint par Télé pour Tous". Abidjan: Evaluation Service, 1976.

impossible for one person to complete these forms during one program session, given the fact that the average number of spectators is about 50 to 60 persons. Therefore, many observers made their "census" during the program as well as on the day(s) after the program. And it is certain that they not only wrote down the names of the spectators of that particul evening but also the names of other (regular?) spectators. Thus the total number of spectators reported by the observers is certainly inflated.

Caution must also be taken when interpreting the answers on questions about the animation process itself, and the interest and the understanding of the listening group. In many cases answers pertaining to these issues imply almost automatically an evaluation of the work of the animator himself. Because the observer in most cases is a teacher-colleague of the animator, a more positive picture than the actual reality is quite likely to be given.

Finally, we must be careful in interpreting the answers of listening group members to a questionnaire administered by the observer or animator. There are many variables which could affect the final reply, and which threaten its validity and reliability. Invalidity occurs when the respondent does not understand the question in the same way as it is original formulated (in French) because the translation by the interviewer or interpreter is not perfect. The same is true for the opposite situation. The translated reply the interviewer receives and writes down may be removed from the original answer given by the respondent. Unreliability is produced when the interviewer who was never trained in interview techniques and probably has a limited notion of research methods and conditions, suggests an answer by the way he is asking or reformulating

the question. Worse will be the situation where the interviewer (or interpreter for that matter) makes his own interpretation of the answers of the respondent, or even invents the replies. The training of 30 out-of-school animators and 10 Pedagogical Advisors as interviewers during a 5-day seminar in Bouake in April 1976 was a step to carry out field surveys more scientifically.

5. Some Village Characteristics

In the first questionnaire we asked the 40 observers to provide information on the economic, social and agricultural infrastructure of the village. We were in the fortunate position to compare this information with data of the Ministry of Planning (CNTR, FNAR, DATAR), which are based on 1965 administrative census figures. (The population figures are based on the first national demographic census of March 1975)(15a). In Table 2 we give some of the basic characteristics of 38 out of the 40 observer villages.

Some explanation of the items in the table is necessary: at the top of the page we see that 21 villages are so-called Center Villages. Center Villages are those villages which have been designated by the Government to be the nucleus around which the development of the rural areas must take place. These villages will be the first to be equipped with electricity, running water, dispensaries and all kinds of other social service

(15a) Only in September 1976 we could dispose of the 1975 census figures concerning the male and female population of all villages and towns. Comparison with previous figures (1965 administrative census) and the estimates made by the observers reveal that our sample included too many "large" towns.

which are to be used by the inhabitants of the Center Village itself as well as by the people of the neighboring villages. (In our table the 21 Center Villages also include 4 AVB villages, villages that were moved and rebuilt before the Kossou Lake was formed which covers the old village sites). We also notice that the majority of the observer villages are rather small. On the one hand this is a correct representation of the Ivorian reality where there are more than 8000 hamlets and little villages (less than 2000 inhabitants). On the other hand it is an artifact due to our sampling procedure. We excluded, deliberately, large towns. The inclusion of two towns of 8000 - 9000 and of 13000 - 14000 inhabitants is accidental. At the start of our research we were not very familiar with the field, and therefore did not know their size(15

In order to get an overall characterization of the 37 villages we computed a "modernity" score based on the presence or absence of 18 indicators of "modernity", such as a maternity, a dispensary, a social center, electricity, post office, a chain store (PAC or AVION), a garage, a youth center, stone houses, latrines, etc. We found that 23 villages were LOW on this scale, 9 MEDIUM and only 5 HIGH.

"Modernity" is certainly not a sufficient indicator of the extent to which the village and its population have surpassed their "traditional" (relative) isolation from the surrounding world. What is certain is that the advent of the colonial conquerrors, and with them the arrival of the money (exchange), economy has profoundly influenced the way in which the socio-economic structure of the village functions. Villages, to a large extent, were self-sufficient in terms of food, clothing and

Table 2: Some basic village characteristics (38 villages)

Center Village	21
Non-Center Village	17
1- 1000 inhabitants	7
1001- 2000 inhabitants	17
2001- 3000 inhabitants	7
3001- 4000 inhabitants	3
4001- 5000 inhabitants	1
8001- 9000 inhabitants	1
13001-14000 inhabitants	1
One school	33
Two schools	3
Four schools	2

Modernity score:	
High (13-18 points)	5
Medium (7-12 points)	9
Low (1-6 points)	23
	37
Economic contact with the outside world:	
High	18
Medium	13
Low	18
	37

	YES	NO
Re-zoning *	19	19
Health Center	13	25
Equipped Water Source	13	25
Extension Agents Present	12	26
Cooperative	11	27
Chain Store (PAC or AVICA)	8	30
Electricity	6	32
Maternity	5	33
Running Water (faucet or pump)	4	34
Cultural Center	2	36
Post and Telephone Office	2	36

* See p. 69 for explanation.

tools in the past. The colonial times, and certainly the time after Independence have greatly altered this situation. Villages may not be very modern in terms of their housing and available social services. They may, however, have many contacts with the outside world. This is a necessary condition if this outside world (i.e. the Government, the commercial companies, etc.) wants to influence or modify the way of living of the rural masses. In order to measure this relationship to the outside world we compared the answers to two questions. On the one hand we asked the observer what kind of agricultural crops were cultivated by the villagers. On the other hand we asked him what kind of crops were sold outside the village. Without surprise, we found that the number of crops sold outside the village was smaller than the number of crops cultivated. Secondly, we found that coffee, cocoa, palmoil seeds, bananas, coconuts, ananas, yams, cassave, rice, cotton and corn are almost automatically sold outside the village. However, coffee and cocoa are always sold outside the village, while the other crops mentioned are sometimes sold outside the village and sometimes kept in the village itself, and then there are a number of smaller crops (onions, peppers, peanuts) that are mainly cultivated for the own village needs. It is clear that coffee and cocoa, and to a lesser extent, palmoil seeds, bananas coconuts and ananas are destined for industrial processing and export, the other crops are for domestic and local consumption.

We computed for each village the ratio between the number of crops cultivated and sold outside the village. This ratio gives some indication of the extent to which the village economy is related to the "outside" world. It certainly does not describe fully the village contacts with

the outside world and the manner and degree of outside influence on the village. Cultural contact, migration, number and level of educated villa people are a few other variables which should be considered.

As can be seen in Table 2, only few villages have an almost self-sufficient agricultural economy (ratio: .00 - .40). Many of the 37 villages have a mixture of an outward and an inward oriented agricultural economy (.41 - .70), while most of the villages have a large trade of agricultural products with the outside world (.71 - 1.0).

5. The Water Situation

Our main interest, of course, was the water situation in the villages. What were the water problems? What kind of water supply did they have? What kind of water related diseases prevailed in the village? Answers to these and other questions are presented in Table 3 from which it becomes clear that water poses many problems in the villages of the Ivory Coast. Seven villages, of which at least two are small towns (Agnibilékro and Napiolédougou), reported no water problems but thirty villages experienced one problem or another. Water insufficiency and dry wells or waterholes are the main complaint. This is no wonder when we notice that most of the villages are dependent on waterholes and wells for their water supply. It is quite likely that most of the wells, private or public are of the traditional type. They are not very deep, they dry up in the dry season, they are located such that contaminated water from latrines and garbage dumps can easily filter into the water, and they are not always well maintained. Only a minority of the villages has a modern water supply. In all the 37 villages there are only seven pumps, and one

Table 3: The water situation in 37 villages*

Water Problems:	
Insufficiency, wells and waterholes dry up	24
No problem	7
Remoteness of water	4
Diseases due to water	1
Problem (not specified)	1

Type of Water Supply:**	
Well (mostly traditional)	24
Waterhole	24
River	9
Spring	8
Pump	7
Other	3
Cistern	1
Faucet	1

Number of Private Wells:	
More than 10	16
6 - 10	4
1 - 5	4
None	13

Diseases Due to Water:	
Dysentery, Diarrhea	16
Dysentery and Guinea Worm	5
Dysentery, Guinea Worm and Cholera	4
Dysentery, Bilharziosis and Cholera	3
Dysentery and Bilharziosis	1
Guinea Worm	1
Bilharziosis	1
Cholera	1
None	4

* Thirty-eight observers returned their questionnaires. One of them did not complete it totally. Therefore his village is excluded from this table.

** Several observers report various water supply sources per village.

village reports a piped water system (faucet).

It is significant to note that when asked about the water problems only one observer answered that water related diseases were a problem in the village. However, when asked to check on a list of diseases, which prevail in the village, only four observers say that the diseases mentioned by us do not exist(16). Thirty-four villages report water related diseases ranging from the common Dysentery (or Diarrhea) to the Guinea Worm and even Cholera.

Despite the existing water problems and diseases, only half of the observers say that they know of actions in their village to improve the water supply and quality. The reasons for this apparent hesitance, refusal or impossibility to do something about the water situation will be presented when discussing the impact of the Water Series.

6. Some Correlations

In order to complete the picture of the observer villages we produced some simple cross-tabulations of the major descriptive variables, and computed in some cases the Chi-Square trying to find out whether there existed any correlation between these variables. As expected, we found a somewhat positive relationship between Modernity Score and the "economic contact" ratio. There was also some positive correlation between "modernity" and whether the village foresaw any action to improve the

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(16) It is a well-known phenomenon that a chronic situation which "objectively" must be considered a problem or hazard to the local population, is not recognized as such by them. In many instances rationalizations are found to explain the problem (away).

quality of a water. We also found that the more "modern" the village the more "modern" the techniques used to avoid water related diseases. While in more "traditional" villages, the cleaning of the water source was the preventive measure most often mentioned, in the "modern" villages the observer reported more often the use of the water filter, the boiling of water and the construction of a well. As expected, there was a slight negative relationship between "modernity" and the number of water problems in the village. Less "modern" villages had more water problems than more "modern" ones.

Though the computed correlation is not significant statistically speaking(17), we think the conclusion is warrented that less "modern" villages have more water problems and anticipate less actions to improve the water situation. It is very probable that the intention to and the actions of improving the water quality and the water supply are related to the material capabilities of the village and the existing support structure of extension agents, health care delivery systems, and other incentives. This will be discussed in more detail in Part V.

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(17) Chi-Square = 5.06, df = 2, at the 5% level.

PART III. THE WATER PROGRAMS, THEIR DEVELOPMENT AND REACH

1. Introduction

During the preparation of the first Water Series, already one program concerning water was shown: Why a Well?, a TV film produced by the National Committee for Nutrition and Development (CNAD). This program attracted the highest number of spectators of all the programs of the 1974-1975 season, and it equaled the audience figures of the most watched programs of the 1975-1976 season in which much more schools were available than in the preceding year(18).

On the basis of the feedback data it was estimated that 449 out of a possible of 658 schools were opened on the evening of November 20, 1974; that the average number of spectators was 85; and that the total audience consisted of 30,532 persons.

Actually this "well" program was aimed at a limited audience. The "official" target group were the "inhabitants of the regions affected by the Guinea Worm" (mainly the Cocoa Belt in the Center of the Country). Feedback data show that the interest of the general audience for a program aimed at a specific target group is always lower than the interest for a program broadcast for the national audience. The Why a Well? program is probably the exception to the rule. Its unusually high interest and audience figures could partially be explained by the fact that according to information gathered in 1973-1974(19) health topics are highly valued

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(18) See Appendix F for a complete list of audience figures of the 25 water programs

(19) Anthony Kaye and Frans Longlet: Op.cit., pp. 22-29.

by the rural audience. The objectives of the program in question, though "officially" meant for a specific target group, were such that they could easily be appreciated by a larger audience. The first goal was to convince the peasants of the dangers of drinking water from the water hole, and secondly the program tried to convince them of the necessity of constructing a well in the village which would provide a safe water supply.

The massive interest was confirmed by the particularly high return of the feedback forms (58 percent of all the forms distributed, while during the year 1974-1975 the usual return rates varied between 27 and 62 percent), and the answers on the feedback question measuring the extent of the interest of the audience. Eighty percent of the listening groups showed a high interest; in 13 percent of the villages the interest was medium; in only 2 percent of the cases the interest was low. These figures gain significance in comparison with the interest figures for the other water programs, which we will examine in the following sections.

In October 1974, the work group for the Water Series was constituted. It was composed of the representatives of ministries and agencies concerned with the problem of lacking and contaminated water, who could provide valuable expert assistance during the conceptualisation of the program contents and during the preparation of the film scripts.

It was the task of the work group to propose a balanced programming schedule taking into account pedagogical as well as technical principles. On the one hand the various programs should start with presenting and discussing simple already known elements and situations (for example, the water problem in one region, which would particularly appeal to the inhabitants of that region), and on the other hand they should introduce

progressively new notions necessary for a good understanding of the problem and of possible solutions. The moment the work group started its deliberations (October 15, 1974) it was already under considerable pressure to establish immediately a list of programs ready to be produced by the out-of-school television production unit. The reason for this was the uncertainty within the Out-of-School Education Department about the programming for the period January 1975 - June 1975. At that moment some program topics for that period had been decided upon, but the majority of the Wednesday and Friday evenings - the usual TV for Everybody broadcast nights - were as of yet unfilled, and it was thought that the Water Series could start in January 1975. Also a limited number of cameras and other production equipment were available, which meant that the three production teams had to share the same equipment, and therefore a very precise and dense planning of preparation, travel, shooting, developing, cutting, etc. had to be developed. The earlier the list of programs could be established, the earlier the scripts could be ready, and the sooner the production teams could start their work.

The pressure on the part of the out-of-school production unit certainly affected the profoundness of the discussions concerning the educational objectives of the series. If more time could have been devoted to formulating and operationalising the objectives, there would not have been six programs of the same format - the first six introductory programs of the series presenting the water problems in the main regions of the Ivory Coast - which according to the audience and interest figures became less interesting for the spectators after a while (see Appendix F).

The first session of the work group drafted a list of 18 programs of which, finally, 13 were produced. During the total 10 sessions of the work group (from October 1975 to March 1975) the topics of each program, a program synopsis and a program script were discussed before the production team got the green light to go ahead with the shooting of the films (16mm). (This is always exterior shooting in the villages throughout the whole country.)

In October 1974, one expected the Water Series to start in January 1975. After the first working sessions and the first shooting it became evident that the programming had been too optimistic and that the start of the series had to be postponed to February. Some weeks after this decision it was realised that also this planning could not be held, and the work group reserved the Wednesdays and Fridays of April and May 1975 for the 18 anticipated programs. After another reorganisation of the programming (March 1975) the final broadcasting schedule became the first six introductory programs on the Wednesdays and Fridays of April 1975, and the 7 remaining programs on the Wednesdays thereafter through June 6, 1975.

2. Objectives

In a previous report(20) we distinguished three categories of objectives pursued by the various TV for Everybody programs:

a) sensitization and information

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(20) Anthony Kaye and Frans Lenglet: Op.cit..

b) understanding and learning

c) incitement to action and action itself

Using these categories to characterize the first Water Series we can divide the series into three parts each having its own impact defined in terms of attitude change, cognitive change and behavioral change.

The first part of the series, the first six programs, tried to sensitize and inform the population at large about the problems which exist in the various regions of the country with respect to water supply and water quality, while at the same time showing some characteristics of the regions presented. For example, after the first program of the series which discussed in a general way the importance of safe drinking water, the second program, Drought in the North, described the Northern region of the country as a dry area with great agricultural potentialities (cotton, cattle breeding) before showing the many problems the lack of water is creating in this region. In a similar fashion the following four broadcasts presented the water problems of the South, the towns, the Cocoa Belt (Wester East) and the mountain area in the West.

These programs had, first of all, a sensitization and information objective. They wanted to make the audience aware of the problems the lack of (safe) water is creating. The resulting impact, if any, was an attitude change among the spectators who had been made aware that their own region was not the only one to have water problems. An additional objective, also connected to attitude change, was to familiarize the audience with the different regions of the country. It is a fact that still large parts of the population know only their own region. In order to promote a sense of "national identity", the out-of-school television

is also charged with the objective of showing the customs, cultures and ways of living of the various peoples of the Ivory Coast, so that, for instance, the Bété of Gagnoa will recognise and possibly appreciate the very different life style of the Lobi of Bouna, and that the Appolonian of Assinie will know the crops cultivated by the Malinké of Odienné.

This second objective got a special significance. The working group of the Water Series decided that TV programs alone would and could not provide sufficient information to familiarize the audience with the ethnic and cultural diversity of the country. Therefore, another means was sought to introduce some geographical notions and representations to the audience. A simple map of Ivory Coast was produced, presenting the four cardinal points, the three main vegetation zones of the country, the major towns and roads, the six administrative departments, and the principal agricultural resources of each department (represented by a stylised symbol explained in other accompanying material: photographs and designs). This map was widely distributed to all the out-of-school animators, and we believe that they have made good use of it. In almost every classroom we visited during our village visits in November and December 1975, we saw at least one copy of this map. Several times during animation sessions we observed how the teacher-animator used the map to locate a certain region or crop. We have the rather encouraging results of a survey done in 1975[21] which showed that almost half of the respondents reached a high score of correct answers indicating a sufficient

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(21) Frans Lenglet: "Connaissance de la Carte de Côte d'Ivoire". Abidjan: Evaluation Service, May 1976.

knowledge of the regions, the towns and the crops of the map(22).

The second part of the Water Series, two programs: The Water Cycle and Dangerous Water, had as an objective the transmission of a certain knowledge. It was expected that after watching and discussing these two programs the spectators would have some knowledge of the principles of the water cycle and the contamination by polluted water. The first program explained the water cycle: evaporation of sea water, rain, filtration of water into the soil, rivers, and springs. The second program showed how water becomes contaminated and transmits diseases through the micro-organisms and germs living in the water, but which are undetectable with the naked eye.

The third part of the series composed of the last four programs of the series: Filtered Water, Water Reservoirs, Improvement of Water Sources and The Well aimed at a change of behavior. It instructed the audience about the various possibilities and means to obtain safe(r) drinking water and it incited them to action which could lead to a better water supply. The principle and the mode of utilization of the water filter was explained (During the broadcasting period of this first series an advertising and publicity campaign of TV spots and newspaper ads helped to promote the purchase of water filters). It was shown that in certain regions the cistern was a good solution. The villages that were not able to construct

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(22) Because this study measured the knowledge of the respondents only after the TV programs for which the map had to be used and no control group existed, we do not know whether the score of the viewers was significantly higher than the score of those who had not been exposed to the TV programs and the map.

a cistern or a well were advised to improve and clean up their traditional water sources (waterhole, spring, river). Finally, the well was presented as the best (hygienic, safe and permanent) solution to the lack of water.

Already during the preparation of the first series the work group considered other water related issues which could be interesting topics for another program series. The diseases due to contaminated water were of particular interest to the CNPR and the IMEP, members of the work group, and it was decided that a second Water Series would be devoted to this theme.

A first meeting of the new work group for this series was held in April 1975. A list of eight programs was proposed for the second series, of which, finally, seven were broadcast during the first term of the 1975-1976 school year.

The overall objective of the second Water Series was, first, to emphasize once more that water contains invisible microbes which can be revealed by using the microscope. Secondly, to have the audience understand that thus water plays a central role in transmitting certain diseas Third, to explain that these diseases are a social plague weakening the persons affected, and that this in turn has severe socio-economic repercussions. Fourth, to show that one can avoid the diseases by taking individual or communal precautions, and that the diseases themselves can be treated.

The second series started with a rerun of the highly successful film of the first series, Dangerous Water. What followed were seven programs each devoted to a particular disease: Guinea Worm, Dysentery, Ankylostomiasis, Bilharziosis, Malaria and River Blindness (Onchocercosis).

The series closed with a program reiterating the previous ones and inciting the spectators to apply the various precautionary measures and actions shown (using water filters, building latrines, cleaning the compound, constructing a well) and to organize hygienic committees in each village which should guard the cleanliness of the village.

On the basis of the reactions of the audience and the animators (gathered through the feedback forms and unsolicited mail) it was concluded that the impact of the campaign on water and diseases would be greater if the TV programs were supported by other means. To this end the work group decided to have produced a set of posters presenting the different diseases, their origins, their cycle through contaminated water, the contamination of the individual, and the possible preventive measures. The animators were asked to use these posters for repeating and explaining the content of the broadcasts and for emphasizing certain essential points. Though during our village visits we observed many of these posters adorning the walls of the classroom, we have no information on how they were used by the animators. It is certain that the composition of these posters was questionable. The poster contained too much information at once; the representation of certain essential details was not correct (e.g. the worm or the microbe carrying the disease had the same size as the foot of the man affected by the disease), and one of the posters contained incorrect information (a preventive measure was shown which did not apply to the particular disease of the poster).

3. Summary of the Audience and Interest Figures(23)

A study of all the audience figures for the two Water Series and the Why a Well? program shows a marked difference between the various mean statistics of each program or series. Let us look first at the number of opened schools for the various programs in Table 4.

Table 4: Average number of opened schools

Why a Well?	449	68% of "available" schools (658)
First Water Series	196	30% of "available" schools (658)
Second Water Series	422	47% of "available" schools (899)
All 25 Water Programs Together	296	38% of the average number of "available" schools (778)

We note in this table a considerable difference between the average number of opened schools. The Why a Well? program and the first series were broadcast during the same school year. In that year, there was a total of 658 schools where at least one teacher-animator had indicated his willingness to animate the TV for Everybody programs. We see that the Why a Well? program reached 68% of the 658 schools, while the first series was received in only 30% of the available schools. The second series shows an improvement in the average number of opened schools in comparison with the first series, 47% of the available schools were opened.

(23) See also Appendix F. The figures presented and discussed here are provided by the feedback system. They pertain only to the spectators who watch the TV programs communaly in the school and who discuss the "lessons" after the programs. All spectators that watch the programs in private homes are excluded.

The average number of opened schools is not a good indicator of the qualitative interest in the program. The average number of spectators per classroom provides a better idea. In Appendix F we see a large variation in this indicator, 85 spectators for Why a Well? and 49 for the program on Ankylostomiasis.

Comparing the averages per series (Table 5) we observe that the

Table 5: Average Number of Spectators per Classroom*

Why a Well?	85
First Water Series	64
Second Water Series	53
All Programs	61

average number of spectators per classroom declined in the period November 1974 to December 1975. This could mean that either the interest in the water programs became less or that the first curiosity for the out-of-school television had withered away. The latter explanation could be confirmed by the figures for the second series which seem to stabilize themselves around 51 to 55 spectators per classroom (see Appendix F). Another hypothesis for a decreasing audience has been advanced: the work in the fields and the rainy season that prevent the peasant from coming to the school. This could be true for the first series because agricultural activity is high during the months of April, May and June. And

* Our two spectator surveys, which were carried out independently from the feedback system, indicate an average number of 55 spectators per classroom for the first series and 56 for the second series. A downward correction of these figures similar as for the feedback figures is warranted.

these are also the months when the big rains start. This hypothesis is however difficult to maintain for the decreasing figures during the secon series because the series took place in October and November, which lie in the dry season. (The generally higher figures for the second series - see Appendix F and G and Table 6 - are due to the larger number of participating schools in 1975-1976). Thus, all three explanations; weather, declining interest and the end of curiosity could have some value. Only a prolonged monitoring of the audience figures can provide a more conclusive explanation.

The average number of spectators for the two series and the WELL program are presented in Table 6.

Table 6: Average Number of Spectators

Why a Well?	30,532
First Water Series	9,970
Second Water Series	21,732
All 25 Programs Together	15,497

The level of interest for the various programs shows also considerab differences (see Appendices F and G). Ninety percent of the animators who returned their feedback forms indicated that the interest of the listening group for the rerun of the Dangerous Water program had been high. Similar high scores are obtained by Why a Well?, the first showing of Dangerous Water and Filtered Water. In general, the first series aroused a larger interest among the audience then the second series.

4. Audience Composition and Regularity

Did the water programs reach the target audience? According to the documents and speeches of the authorities the TV for Everybody programs are aimed at the rural masses, and especially the adults. We have some data to illustrate whether this target audience is reached by the out-of-school television.

Two surveys of the Ivorian Institute for Public Opinion (IIOP) done in 1975 indicate that for the urban as well as the rural population(24) there is an over-representation of schooled individuals (having followed primary and secondary or more education) among the spectators of TV for Everybody as is shown in Table 7.

Table 7: Regularity of Watching TV for Everybody by Schooled and Non-Schooled Respondents in Rural and Urban Areas (in percentages)

	Regularly	Sometimes	Rarely	Never/NA	Total
Rural					
No school	1	3	5	91	100
Primary	5	17	18	60	100
Secondary/higher	15	20	29	36	100
Urban					
No school	7	9	13	71	100
Primary	21	23	19	37	100
Secondary/higher	20	35	18	27	100

(24) The precise definition of "urban" and "rural" is not known, but we assume that "urban" encompasses all the towns with more than 10,000 inhabitants.

But the question, of course, is whether the total rural population had access to the TV programs. First, we do not know where or how many villages and small towns were sampled. Secondly, we do not know whether the sampled villages and small towns had a TV school or whether there was an out-of-school animator. Thus it could be that the over-representation of schooled individuals in the table is a consequence of their having more access to television to begin with. This is somewhat confirmed by the study on the TV reception structure in Abidjan (25).

Our second and third surveys (see Part II) provide some support for the hypothesis that the illiterate rural mass is not reached by TV for Everybody. We asked whether the spectators understood French (the language in which the out-of-school programs are broadcast). In both surveys 40% of the adult respondents answered "yes", 60% answered "no". Of course, there is a difference between understanding French and speaking it or being litterate. But it seems to us that 40% is a rather high figure when 10 to 15 years ago the schooling rate in the whole country was only 30%. At present the total adult population should have a schooling rate lower than 40%, and thus if the TV for Everybody audience would be representative for the total adult population it could not attain a 40% literacy level. The fact that we found a 40% understanding of French could mean that the target audience is not reached. Even if the peasant population is under-represented among the TV for Everybody audience, a large part of them coul

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(25) Joseph Anselem and Elisabeth Bouchet: "Réseaux d'Ecoute en Espace Urbain". Abidjan University: Architectural and Urban Research Center, 1975.

be reached by the TV message through their relatives, neighbors, friends and co-villagers who watch the TV programs. There are indeed some indicators that especially urban spectators transmit part of the information received by the medium TV to their relatives at home or in their villages(26).

Other characteristics of the audience are: 70% of the spectators are men, 30% are women. Feedback figures and the data of our surveys concur on this point. Twenty-nine to 40% of the audience members (during the second and the third survey respectively) have children in school. It is interesting to note that among pupils' parents there are relatively more persons who understand French than among non-parents. The age and sex breakdown is presented in Figure 1., from which it can be seen that the majority of the spectators fall in the younger age groups. In comparison to the age distribution of the total population these younger groups are overrepresented among the TV viewers encountered in the second and third surveys. It could be argued that this is a fortunate phenomenon given the fact that the younger people are those who should start development oriented actions. But if it means that the older people, who often hold influential positions in the village structure, are not reached by the TV messages, these development activities could be hampered because the consent of the village elders will be more difficult to obtain. The field animation study(27) and future audience surveys could shed light on this issue.

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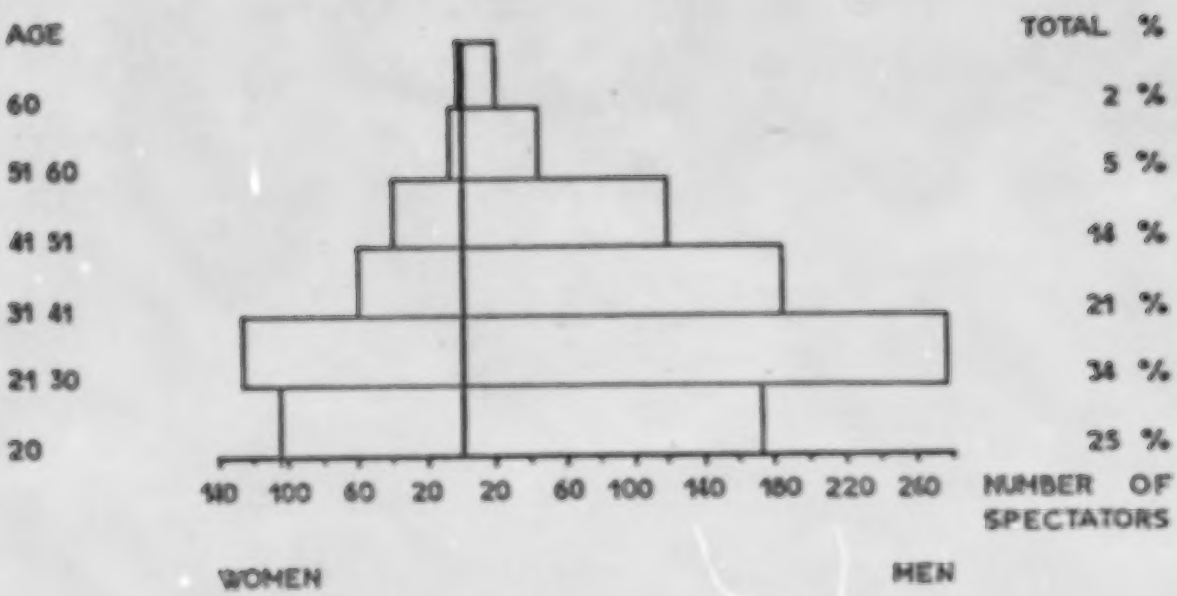
(26) Louise Bourgault: "L'Ecoute des Citadins". Abidjan: Out-of-School Education Department, 1975.

(27) Annie Benveniste: Field animation study. (Forthcoming).

FIGURE 1 : AGE PYRAMID OF TV FOR EVERYBODY SPECTATORS.



Especially for a series of programs where one program is built upon the other the regularity of watching becomes important. Table 7 showed that the regularity of watching TV for Everybody among rural viewers is lower than among urban spectators. This could be attributed to the relative inaccessibility of a TV set in the village. Data of our third survey indicate that during a period of ten broadcasts 11% of the respondents had seen one or two programs, 20% three to four programs, 33% five to six programs, 23% seven to eight programs, and 4% nine to ten programs. If "regular" is defined as "having watched at least half of all programs" it would mean that more than 50% of the interviewed spectators are regular ones.

5. Note about the Interest for the Programs

In Appendix E figures are presented on the HIGH, MEDIUM or LOW interest of the audience for the water programs. In Appendix G the evolution of the rate of HIGH interest for the water series is shown. As was the case for the other feedback data we must assume that the interest figures are not completely reliable. But the data we have are suited for comparative purposes.

We note that:

- Some programs have attracted a larger audience than others. Many variables could influence the attendance. Analysis of the feedback figures reveals that the weather on the evening of the broadcast explains to a certain extent the fluctuation in attendance figures. Holding "weather" constant, it is the content of the program which determines the number of spectators and their interest. A major intervening variable is the role which is played by the out-of-school

animator. Minor intervening variables are: whether the program is broadcast just before or after the school holidays, whether the village chief is present, whether the village is predominantly Christian, etc.(29).

- Most watched programs were Why a Well?, Water, Source of Life during the first Water Series, and Dangerous Water and Dysentery during the second series. The large attendance for Why a Well?, Dangerous Water and Dysentery correlates with the large number of listening groups that expressed HIGH interest for these programs. The reason for this must be found in the fact that these three programs had at least one element in common. All three contained shots of micro-organisms filmed through a microscope. In the classrooms we have noticed that these images really shocked the audience, and that they became the topic of much discussion afterwards. According to the reactions of the audience the Dangerous Water program was particularly appreciated. We believe that it was a very well made film. (In 1976 it received a prize during the Japan Prize Contest for Educational Films and Documentaries
- In general there was more HIGH interest for the first Water Series than for the second. Did the out-of-school animators become more realistic in their assessment of the audience's interest, or is the repetition of the same program format during the second series due to the lower interest?

It is difficult to determine whether the size of the audience itself was important or not. During the year 1974-1975, there was a total of

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(29) See for a detailed discussion of these variables: Rudiger Fritz: Op.cit..

1,151 TV schools of which 658 were known to have been opened at least once for a TV for Everybody broadcast. The number of TV schools increased to 1,481 in 1975-1976. In 899 of them at least one teacher expressed willingness to animate the program sessions. Thus the maximum possible number of seats available in 1974-1975 was 1,151 X 1 classroom X 70 seats 80,570 seats. If only the 658 declared schools were opened, there would have been available 658 X 70 = 46,060 seats. For 1975-1976, the figures are respectively 1,481 X 70 = 103,670 and 899 X 70 = 62,930.

For the Why a Well? program in 1974-1975, 38 to 66% of the seat capacity was used, for the Dysentery program in 1975-1976, only 30 to 50% of the seat capacity was used.

Up until now we have been discussing the reach of the water programs of the out-of-school television. Their impact is a different story.

PART IV. IMPACT

1. The Why a Well? Program

The results of the first study of the impact of a TV for Everybody program are worth repeating here. For a more detailed presentation we refer the reader to the reports published on the Why a Well? program(30) and the summary given in the First Operational Year Report(31) which deal with the feedback figures of this program and the findings of a follow-up study. The final result of the two surveys was that 23 out of the 136 villages which had answered "yes" to the feedback question whether the listening group had taken a decision concerning an action after having seen the TV program(32), had indeed undertaken an action which was directly related to the message of the program: the construction of a well. At the time of the follow-up study(33) we noted that:

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(30) CNAD and Service d'Evaluation: Op.cit..

(31) Anthony Kaye and Frans Lenglet: Op.cit..

(32) Four-hundred feedback forms had been distributed. Two-hundred-and-fifty (54%) were returned. One-hundred-and-thirty-six out of these 215 animators (63%) reported that their group had taken a decision concerning an action.

(33) For the follow-up study 93 questionnaires were sent to those villages of which we know that they planned to construct a well. Twenty-three of them (11% of the 215 feedback forms) had started an action leading toward the construction of a well.

- one village was constructing a well
- ten villages had made a request to the Sous-Préfet for well construction or well drilling
- seven villages had made the reques. and had collected the necessary village contribution to a well construction project
- five villages had collected the village contribution but had not yet made the request.

Twenty-three villages undertook actions which resulted or will result in a modern well in the village. Assuming that before the Why a Well? these villages were dependent on waterholes and traditional wells for their water supply, and calculating the number of people in these 23 villages having watched the program on the basis of an average number of 85 spectators per school, we conclude that 1,500 to 2,000 individuals (united in 23 listening groups) took a decision which finally resulted (or will result) in a better water supply for about 11,500 villagers (based on an average of 500 inhabitants per village). Thus 11,500 persons profited directly from the Why a Well? program assuming the actions reported were set in motion by the TV program(34). If every TV for Everybody program could have the same impact, the effectiveness of the out-of-school project would be rather impressive. There are, however, many obstacles to a successful impact. We will discuss them in the following sections, but we will quote already some remarks made by some animators after the Why a Well? program which indicate some

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(34) We do not know whether indeed the TV program was the catalyst for action. If we had had a control group we could have arrived at more precise conclusions.

reasons why the listening group or the village did not follow up the TV program.

- Two animators write: "Well drilling attempts were unsuccessfull, since then nothing has been undertaken".
- Two other animators remarked: "The villagers do not have the means to collect 150,000 CFA Francs." (Sum necessary to be eligible for State aid).
- Other remarks: "The SODECI (water distribution company) has taken away the pump, which was out of order, for repairs. Since then the village has not heard anything more".
- "The village has put in a request for a well, and has given the money to the Sous-Préfet. This has remained without results".
- The money which was collected for well construction has not been found after the death of the village treasurer".

In October 1975 we conducted a second follow-up survey in order to assess the progress of actions and decisions made immediately after the Why a Well? program, and possibly under influence of the first Water Series (April-June 1975). Through the mail we tried to contact the 235 animators (or village listening groups) from whom we had feedback information. One type of questionnaire was sent to 139 villages(35) (Group A) where, according to the feedback results, immediately after the program a decision had been taken to start some action. We wanted to know whether the action had been carried through or to what extent it had been completed. We also wanted to know the difficulties and barriers

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(35) These include the 136 villages of p.46 and 3 additional ones which returned their feedback forms late.

encountered during the action, and the possible reasons for failure in case the action had not been completed. Another type of questionnaire was sent to the remaining 96 villages (Group B) which had given a negative reply to the feedback question on "decisions taken". We asked them whether they had reconsidered their negative decision, and if so at what stage the village was in its action and what difficulties it was encountering. In Table 8 we provide a summary of the answers to the first questions of both surveys.

Table 8: State of Decisions and Actions one Year after Why a Well?

Group A		Group B	
Feedback: YES decision		Feedback: NO decision	
Return rate of questionnaire	47 (34%)	Return rate of questionnaire	59 (61%)
Action continued	26*	No decision and no action	37
Action stopped	14	Decision and action	14
Action completed	7	Action completed	8

* These include the 23 villages mentioned on p. 47.

We note that the number of 26 YES Decision and Continued Action villages does not exceed very much the number of 23 villages which said they were in the process of undertaking some action during the first follow-up survey. But we also see that another 22 villages changed their

original opinion and took a decision to do something about their water supply and water quality in the period of 11 months since the Why a Well? program.

What is more revealing is the number of villages that terminated the construction of a (traditional or modern) well or the repair of an old well or water pump. Seven villages of Group A and eight villages of Group B, a total of 15 villages, announced their action accomplished. This is almost 6% of the original 235 villages that returned their feedback forms(36). Another group of 40 villages (17% of 235) were in the process of having a well constructed or repaired, and were at different stages in this process: collecting money, request to the Sous-Préfet, contact with the technicians (drilling or repair/maintenance team). Thus, after 11 months about 21% of the villages we know for sure to have watched the TV program had done or were doing something which was related to the program's message.

This last statement needs some qualification. It can indeed safely be assumed that the 26 villages of Group A started their action under influence (not necessarily exclusive influence) of the TV program in question. The decision of the 22 Group B villages to undertake some action was not immediately triggered by the Why a Well? program. In their feedback answers they said they had not taken any decision. However, in answer to our follow-up question when the new decision to go ahead with the action had been taken, 16 out of 22 indicated that they had taken

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(36) Four-hundred feedback forms were sent out. Finally 235 (59%) came back.

the decision in the period between November 20, 1974 and the end of the first Water Series in June 1975. Twelve of them linked their decision and action directly to the water programs. This is all strong evidence that the various "water messages" had an immediate impact, also through the reinforcement of one program by the other.

2. Water Problems

The various surveys we conducted (see Part II) were mainly designed to obtain longitudinal data in order to assess the possible changes in the village water situation under the influence of the TV programs and the discussion groups thereafter. Unfortunately, the 40 observers did not receive any research training, and we lacked adequate resources. This prevented the collection of real change indicators. Another reason for this lack of change indicators lies in the fact that especially behavioral changes (actions and action results) do not show up immediately after the TV program. They need a long time period for materializing, and they can be assessed and judged only from a longer time perspective. There are, of course, attitudinal and cognitive effects of watching out-of-school television and participating in the discussion groups, and even certain behavioral changes, that can be ascertained immediately after the "treatment". For instance, awareness of the water problems in the country and knowledge of the water cycle can be measured immediately after exposure to the relevant TV programs. It can even be determined how many villages follow up a certain "advice" given to them, for example, the boiling of water or the cleaning up of the compound. Other individual,

and certainly, communal actions need much more preparation and execution time, for example, latrine and well construction. For these reasons we are not in the position to give a clear-cut answer to the question whether the out-of-school TV programs had an impact, and what kind of impact it was. There are, however, many indications for a certain effect which we will present, discuss and interpret in the following sections.

In the first survey of February 1974, we asked the observer whether the village experienced any particular water problems. Out of the 37 villages on which we have data, seven did not give an answer or said they had no water problem. One village reported a water problem but did not specify of what kind. Twenty-four villages complained about insufficiency of water and about wells or waterholes that dry up after the rainy season. In four villages the water source was far away, forcing the women to walk long distances in order to obtain water. One observer reported that there were diseases in the village due to polluted water(37)

In the third survey, almost nine months after the completion of the first one, and after 24 water programs we found that 10 out of 15 villages which had water problems in the beginning of 1975, still had water problems. But in 4 villages something had been done to improve the water supply: in one village the water pump which had been out of order was repaired; in two villages the maintenance team for the water pumps came for regular monthly visits, and in one village a traditional

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(37) See sections II.5 and II.6.

well was dug. We do not know the extent to which these changes in the water situation were caused or influenced by the exposure of the villages to the water programs.

3. Well Construction

In contrast to the findings of the Why a Well? surveys, which covered a longer time span than the water surveys, there was only one village among the 40 observer villages that reported that it had constructed a (traditional) well. This is the more surprising considering the fact that the first Water Series was conceived of as building the case for the well as the best solution to all water problems. Many programs ended with the advice of constructing a well, and the last program of the first series was totally devoted to this issue.

But the construction of a well is also the most difficult action a village or a listening group can engage in. In contrast to other actions, like the filtering or boiling of water, it requires the cooperation of the total community; it requires the consent and authorization of the village chief and village elders; it requires a relatively large amount of money (about US $600) to be collected as the village contribution to the project; it requires the cooperation and involvement of the administrative machinery (Sous-Préfet and Ministry of Planning Agencies) and technical experts; and it requires the availability of water that can be tapped. All these necessary inputs can be as many obstacles to a successful start and completion of the action of well construction.

In the second follow-up survey of the Why a Well? program we inquired about the difficulties the village had encountered in constructing a well

We asked the animators of the Group A villages(38) what difficulties had interrupted the construction and what problems had delayed the beginning of the construction. We asked the animators of Group B villages what obstacles had prevented the villagers from making a decision to have a well constructed, or what difficulties had obstructed the construction. Lumping together the 89 answers we found that 32 villages were experiencing financial difficulties. It is obvious that without a financial village contribution the drilling team will not be sent to the village. Seven villages were encountering administrative difficulties, and these are, probably, related to the unwillingness or the impossibility of the Sous-Préfet to cooperate. For eight villages there were technical reasons why they had not started or could not continue the well construction: in most of these cases, the animator reported soil aridity which is automatically the end to all water drilling(38a). Thus, financial, administrative and technical difficulties were the major impediments to a successful action.

There were many minor reasons why well drilling had not started or had not been completed. In 15 villages (out of 89 answers) the digging of a traditional well was reported, which is a success in itself. Eleven villages wanted to wait for the construction of a piped water system, which they probably will not get before the turn of the century. Three

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(38) See section IV.1.

(38a) A recent ONPR survey of newly constructed wells has established that the failure rate of the well drillings is very low; that is, a maximum of 4 drillings per village suffices to find water, even in the driest regions. But there are other factors which impede the (correct) utilization of a modern well: bad masonry, incorrect installation of the pump, insufficient maintenance.

animators mentioned political dissension among the villagers, which prevented the taking of any decision. Three other villages considered the construction of a dam, a water tower and a school more necessary and urgent than the drilling of a well.

Thus, we see that there are financial, administrative, technical, political and economic reasons why a village did not implement the action called for by TV for Everybody. Many of these reasons are outside the control of the village community. They are structural obstacles which are the result of a socio-economic and political structure that up until recently was not geared at all to catering to the needs of the local community.

Like so many ex-colonial societies, Ivory Coast inherited and improved the structures and mechanisms of its former rulers. Certainly, during the first ten years of independence, it favored to a large extent a growth model that was mainly based on the extraction of agricultural resources. But the latest development plans increasingly stress the necessity of rural development and human promotion (the development of a more qualified manpower base) as a condition for sustained economic growth. The out-of-school TV project is an example of the latter the national well construction programs are an example of the former.

The translation of intentions into concrete actions is a long and difficult process of which the transformation of the local administrative structures and procedures, and the creation of a rural material and financial infrastructure are essential aspects. In contrast to Tanzania, the rural population in Ivory Coast is not considered to be or to become an active independent force in this structural transformation. The rural

masses are looked upon as the people that have to be integrated into the national development plans as they are proposed and carried out by the Ministry of Planning and the Government. They are considered to be a kind of executive body which has to follow the orders from above. The possibilities for local action are limited to those occasions that fit into the pre-determined development plan. This could be a reason why the actions advocated by the out-of-school television have only a mitigate success. On the one hand the spectators of TV for Everybody are solicited to take decisions and undertake actions, while on the other hand the room for such actions and decisions is rather limited: no money, no administrative support, and a consequent discouragement.

4. Water Filter

The promotion of the water filter as an effective means for obtaining safe drinking water was an essential part of the Water Series. As can be seen from the programming list with the objectives of each program (Appendix B) only one program was solely devoted to the principles and the utilization of the water filter. In many of the programs that follow Filtered Water, especially during the second Water Series, the principles and the utility of the filter were presented again.

There are different types of water filters, each varying in the amount of water it is able to filter in a specified length of time, varying in price and varying in its utilization mode. The filter promoted by the TV for Everybody programs and a simultaneous advertising campaign (see below) is of the so-called "candle" type ("filtre à bougie"): a ten inch cylinder of porous porcelain with on one side a narrow plastic tube.

The filter is placed in a container with unpurified water, the water is sucked through the tube and the filtered water drips slowly into another container placed on a lower surface than the first one. It takes about one hour to filter one liter of water.

The Out-of-School Department, its production and animation teams, put much effort in convincing the population at large that a water filter was essential for preventing diseases due to contaminated water. A sort of campaign was built around the filter program consisting of an advertising and publicity campaign in the national daily newspaper Fraternité Matin during April, May and June 1975 before and after the broadcasting of the filter program on May 21, 1975, and of a simultaneous reduction of 10% in the price of water filters, during the same three months. Instead of the usual price of 1,950 CFA Francs (US $7.80) the filter could be purchased for 1,745 CFA Francs (US $6.98). This reduction was the result of negotiations between the Out-of-School Department and the three importing and distributing firms of water filters in Ivory Coast.

It can be concluded that the filter campaign was successful in terms of a considerable increase in the total purchase of water filters in the country. Whether the purchase resulted or is resulting in a better health situation of the peasants is a question we are unable to answer. We dispose, however, of data which indicate the attitudinal and material obstacles to purchasing and/or using a water filter. Therefore, the filter campaign had a qualified success.

Let us take a look first at the sales figures of water filters of two of the three commercial firms that participated in the advertising campaign. In Table 11 we present their sales figures for the period

April-October in the years 1974 and 1975. If the campaign had an effect then it would show up in the difference between the figures of the two years, and especially during and after the campaign period.

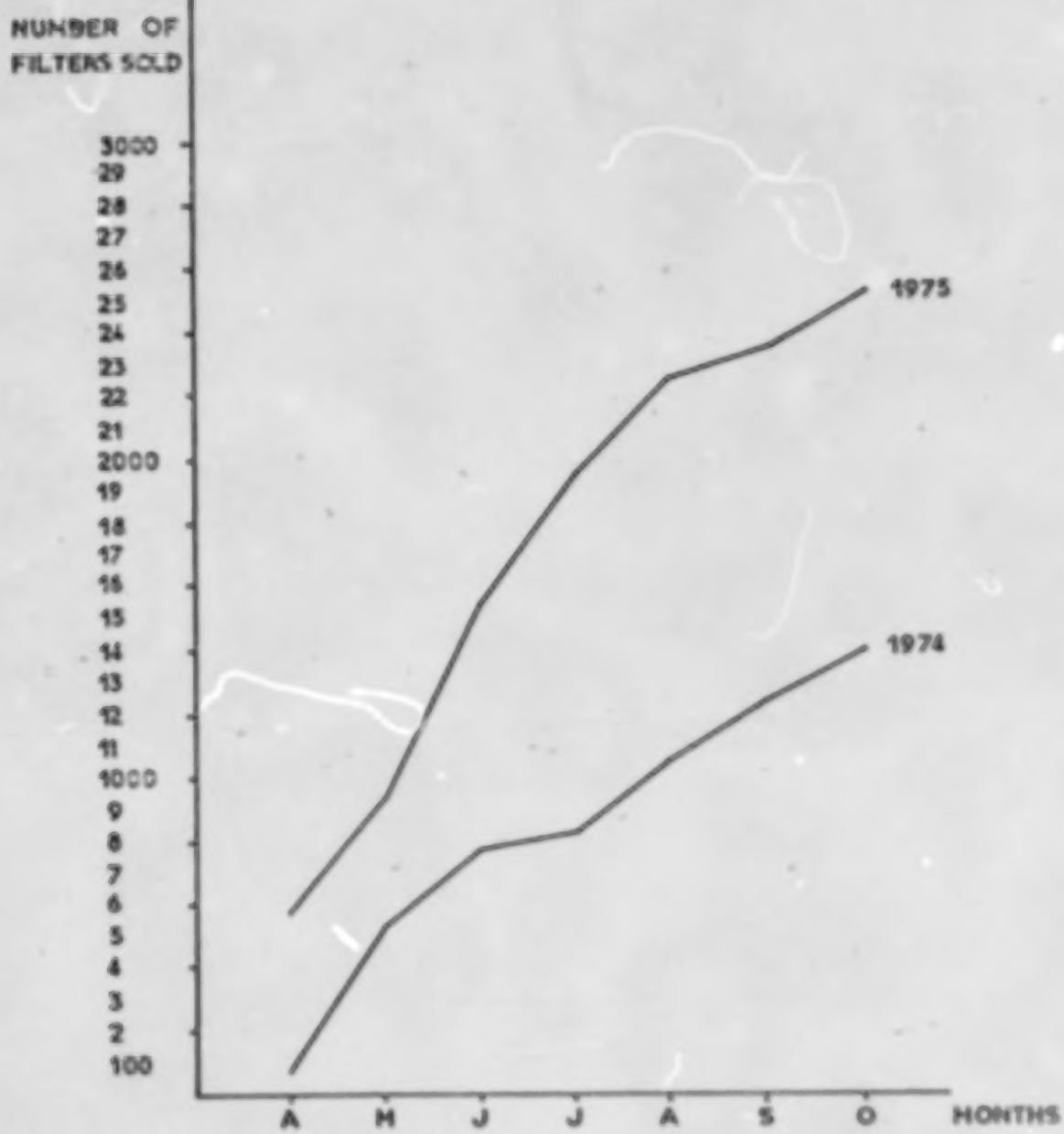
Table 11: Sales Figures of Water Filters in 1974 and 1975

	Apr.	May	June	July	Aug.	Sept.	Oct.	Total
1974	79	440	260	50	222	195	160	1,406
1975	585	359	607	414	304	96	167	2,532
Difference	506	-81	347	364	82	-99	7	1,126

There is indeed a large difference between the two years. While in 1974 the average filter sale was 201 per month, it rose to 362 per month in 1975. A t-test confirms that the difference between the two means is statistically significant ($t = -1.83$, $df = 14$, at the 5% level). A comparison of the curves of the cumulative sales figures shows that the real increase in filter sales took place between May and August 1975, the slope of the 1975 curve being steeper than that of the 1974 curve (see Figure 2); this was the period of the publicity campaign and the TV program. Our data do not allow drawing any conclusion about the relative impact of the TV program or the advertising campaign.

We tried to obtain the figures of the third distributor as well. Until now they are unavailable, as well as a regional breakdown of all the sales figures. Such a breakdown could indicate, for example, whether filter purchase was higher in those regions where the problem of polluted water is more acute than in other areas. It is interesting

FIGURE 2: CUMULATIVE SALES FIGURES OF WATER FILTERS IN 1974 AND 1975



that one filter distributor noted that in the sector of Korhogo, a large town in the North of the country - an area with a particularly sever water shortage - the people had purchased more filters than elsewhere. It would take a separate survey to establish the reasons for this phenomenon; it could be hypothesized that this was the first time that the inhabitants of the Northern region got to know about water filters, and thus were more susceptible to the publicity than the villagers and townspeople in other regions where the use of water filters has been known for a longer period.

Disregarding the fact that the purchase of a water filter does not guarantee its use(39), and that it can only be used when cleaned regularly(40), we now turn to the reasons why the villagers do not use a filter. In the third survey of November 1975 we asked the observer why he thought the villagers did not use a water filter. We provided a number of possible answers and left space for unanticipated answers as well. Twenty-two observers replied to our questionnaire, but some provided more than one reason for not using a water filter. The list of answers and the frequency with which they were chosen are presented in the following list.

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(39) In a village we have had the personal experience that the director of the school offered filtered water to us to drink, while he himself drank unfiltered water.

(40) In the filter program and during the total water campaign the way to clean the filter was not shown or explained at all. In March 1976 a first ten-minute program on the maintenance of a water filter was broadcast. We assume that in the meantime many filters fell into disuse because once clogged its users might not have known how to clean it.

1.	The villagers understand the use of the filter but they do not see the necessity of using it.	12
2.	They do not have the money to buy a filter.	6
3.	Considering the number of household members, the filter is too slow, or the quantity of filtered water is insufficient.	4
4.	The stores are too far away.	3
5.	They do not need a filter because the village has running water, or a well, or a pump.	3
6.	The use of the filter is too complicated.	2
7.	All the villagers are in good health.	1

If we are to believe the observers' answers, then all the villagers understand the principle of the water filter, because none of the observe checked the possible answer: "They do not understand the use of the filte Common sense says that such a complete understanding is impossible, but we have also other data indicating that the principle of the water filte is understood in a limited way by the regular TV for Everybody spectators. We asked the observer to interview five regular listening group members in his village in order to measure their knowledge and use of certain health practices, such as the water filter, boiling water, latrines, the wearing of boots and the protection of food against flies. Asked about the principle and use of the water filter, only 41% of the respondents provided a completely correct answer. Thirty-six percent gave a not completely correct answer, and 20% gave a completely incorrect answer (see Table 9). Therefore, the observers' answers must be inter-

preted with care. But still it is interesting to note that, when assuming that people know what the filter is to be used for, in 12 out of 32 villages the observer thinks that they do not see the necessity to use it. Our discussion of the water problems in the 40 observer villages (Sections II.6 and II.7) showed that the objective need for safer water is present.

Table 9: The Understanding of the Principles of Five Health Practices

	Incorrect Answer	Neither Correct nor Incorrect Answer	Correct Answer	No Answer	Total
Understanding of:					
Filter	25 (20%)	45 (36%)	52 (41%)	4 (3%)	126 (100%)
Boiling Water	5 (4%)	47 (37%)	73 (58%)	1 (1%)	126 (100%)
Latrine	21 (17%)	71 (56%)	30 (24%)	4 (3%)	126 (100%)
Wearing Boots	10 (8%)	101 (80%)	14 (11%)	1 (1%)	126 (100%)
Protecting Food against Flies	2 (2%)	23 (18%)	101 (80%)		126 (100%)

Thus it is not the objective need that determines the use of a filter but the subjective perception of this need. From our discussion with teachers and peasants, and from our participation in the Water Series work group we know that many people, though completely aware of the possible dangers of polluted water, continue their old practices and refuse to adopt innovations. Justification for such behavior are many:

- The water is clear to the naked eye, so there is no danger.
- Diseases are caused by bad things you eat.
- The filter is only for white people.

- Filtered water (or for that matter well water) does not taste as good as water from the waterhole.

These arguments are difficult to counter because they are strongly anchored in the cultural frame of reference. They certainly cannot be invalidated by some TV programs alone.

The other reasons mentioned why the villagers do not use a filter could be rationalizations as well, though it seems that they have a more objective foundation. Money is a major constraint for starting a certain action, as we have seen with the issue of well construction. Another more objective reason is the low "production" of a filter. It takes a long time indeed to produce with one filter a sufficient amount of drinking water for the whole family. The purchase of more water filters per family is limited by their high price.

Now we have seen how many water filters were sold, and why they are not bought or used, we want to know how many people effectively use a water filter.

During the November-December, 1975 visits to 23 villages(41) we inquired among other things about the purchase of water filters. In three villages(42) the observer or out-of-school animator reported that filters had been bought after the Water Filter program. But he did not know for sure whether they were used and we did not get a chance to visit the families that had bought a filter. For the other 20 villages we

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(41) See Stephen Grant and Seya Pierre: Op.cit..

(42) Agnibilékrou (4), Dimbokro (23), Koudéou (12).

could not obtain data. This does not mean that only a limited number of out-of-school listening groups took the decision to buy a filter. Many unsolicited letters to the Out-of-School Education Department testify that water filters were purchased, in many instances with the help of the animator. The precise number remains to be determined.

During the third survey we asked the 126 respondents of the individual questionnaire, administered by the observer, whether they used the filter. We found that 21% said they used one (see Table 10). If our sample was representative then this means that 21% of 14,280 spectators (the number of those who watched the filter program), i.e. almost 3,000 people, use a water filter. We were unable to assess whether its

Table 10: The Application of Five Health Practices

	YES	NO	No Answer
Use filter	26 (21%)	100 (79%)	
Boil water	55 (44%)	71 (56%)	
Use latrine	71 (56%)	53 (42%)	2 (2%)
Wear boots	62 (49%)	60 (48%)	4 (3%)
Protect food against flies	117 (93%)	9 (7%)	

use was encouraged by the TV program and the discussion thereafter.

We did not find a correlation between a correct understanding of the principle of the water filter and its actual use. In general, men understood the principle better than women, but women used the filter more than men. When controlling for literacy we found that literates

use the filter somewhat more than illiterates, but the latter understood its principle somewhat better than the former. However, the numbers in the cells of the crosstabs which produce these findings are rather small, which means that the observed differences are not very statistically significant (Chi-Square = 0.24, df = 2, at the 5% level). Therefore, we have not tried to provide an explanation for them.

5. Boiling Water

During the second Water Series on diseases one of the preventive measures proposed was to boil water before drinking it. We asked our sample of regular TV for Everybody spectators whether they knew the reason why one should boil water before drinking it, and whether they did it. At the same time we asked the observer why he thought the villag did not follow this practice.

As can be seen from Table 9 among the five practices proposed, boiling water was the second best understood. Fifty-eight percent of the respondents gave a correct answer. Thirty-seven gave a not completel correct answer, and only four percent gave an incorrect answer. We also found that the answers of men were somewhat more correct than those of women. Men talked more often about "microbes" or "bad beasts" which were eliminated by boiling water. This holds true also for literate men versus illiterate men, and for literate versus illiterate women.

Though, in general, the principle of boiling water is well understood, its use is something else. Boiling water occupied the second lowest position on the list of the number of respondents using a certain measure (see Table 10). Forty-four percent of them said they boiled

water, 56% said they did not. Among those who boil water women do it more often than men - which is "natural" because water supply is the task of women and not of men - and literates do it much more than illiterates, both for men and women. A Chi-Square test for the relationship between knowing the principle of water boiling and practicing it proved not to be significant at the 5% level (Chi-Square = 4.33, df = 2). Thus, it is not possible to say that those who understand the principle of water boiling practice it more than those who do not.

Ignorance about the principle of water boiling is not the only reason why people do not adopt this practice as can be seen from the following list of reasons provided by the observers.

1. Boiling water before drinking it is too complicated and the method is too slow. 8
2. They understand the principle but they do not see the necessity of doing it themselves. 6
3. They do not like the taste of boiled water. 6
4. They are in good health, have running water, have a well. 3
5. They do not understand why one should boil water. 2
6. Boiling water is impossible when working in the fields. 1
7. Boiling water is a waste of kitchen fire wood. 1

Eight observers think that boiling water is too complicated or that the method is too slow. It is indeed time consuming and it can be imagined that women already tired by the long distance they have to walk to get water and by the heavy water load they have to carry, are

less enthusiastic to add another chore to their many household tasks. Even the material/financial constraint appears when one observes remarks that boiling water is a drain on the fire wood stock which, indicentally requires also much effort from the women to be gathered.

An often recurring reason why a certain practice is not adopted is that the taste of "untreated" water is preferred by the villagers than that of "treated" water.

6. Latrine

The latrine, a practice which could improve the health situation in the village, was only introduced in the last part of the second Water Series, and in a more or less haphazard way. The reasons for building a latrine: prevention of contamination through polluted water, avoiding flies and direct contact with human excrements, were briefly explained in a short sequence of one of the disease programs. This was also true for the way to construct the latrine: the materials and tools needed, its dimensions, its location. Nevertheless, in the last water program which recapitulated all the lessons of the previous programs, the necessity of building a latrine, be it for public or private use, was stressed once more. On the practice of using a latrine we had two questions in the individual questionnaire and one question for the observers. We also made observations during the site visits at the end of 1975. During these visits we encountered only a very small number of villages where some people had started the construction of a latrine as an immediate result of having seen the relevant TV programs. This does not exclude that latrines already existed in these and other villages.

At least this could be inferred from the answers of the 126 respondents, 71 (56%) of whom said they used a latrine. Many of them probably did this already before the TV series.

That the construction of latrines is necessary is confirmed by the finding of our first survey that in at least eight out of 40 villages the people took care of their needs within an area of 50 meters around the water source. Chances of contamination of the water source through soil penetration and direct contact with the water are extremely large in such a situation.

We found a smaller number of people than for the filter who gave a correct answer on the question what was the use of the latrine. Only 24% gave a correct answer, 56% were not completely correct, and 17% did not know to what use was the latrine (see Table 9). When we compared the use of a latrine and the understanding of why a latrine should be used we found a statistically almost significant correlation between a good understanding of the principle and effective use (Chi-Square = 5.86. df = 2 at the 5% level). With respect to the understanding of the principle of the practices, in general men provide more correct answers than women, and literates more than illiterates. This does not hold for the practices' use. Filtering water, boiling water and using a latrine is more practiced by women than by men. We assume that this could be partly explained by the circumstance that women are more concerned by water and health related questions because it is their task to provide water and to care for the health of the family. Men wear more often boots than women, and there is no sex difference for the food protection practice. In general literate people follow the various practices more than illiterates.

The financial constraint is the largest obstacle to the construction of a latrine according to the observers' information. As can be seen at the top of the following list, seven observers mentioned the fact that villagers do not have the money to build or maintain a latrine. But there are other reasons as well.

1.	They do not have the money for building or maintaining a latrine.	7
2.	The bush is sufficient; there is enough space for taking care of one's needs.	4
3.	There are some public latrines	3
4.	They do not see the necessity of constructing a latrine.	2
5.	They feel embarrassed when using it.	1
6.	They are waiting for the re-zoning of the village.	1

A second material reason is that the villagers forestall new construction until the village has been re-zoned. Re-zoning means that the village is divided into lots which are laid out along the straight lines of streets and future electricity lines and water pipes. Every family is assigned one lot on which to build or rebuild the house. In many cases allotment means destroying a large part of the existing houses which do not correspond to the borders of the new lots. Consequently, villagers are forced to invest their money first in new house construction, and they wait, for instance, to build a latrine until they know the borders of their new lots.

Another obstacle to latrine construction is the custom by which the human needs are taken care of in the bush. Not only are people not used

to the little box with a hole in the ground but it is often considered unhygienic by them to go where someone else has gone just before and where it smells. It needs a lot more convincing than a few TV programs to have the latrine accepted as an effective health practice.

7. Wearing Boots

Wearing boots got attention only in the programs on the Guinea Worm disease and Bilharziosis, two diseases caused by micro-organisms or worm larvae that penetrate the skin while in the water. The most radical preventive measure is, of course, avoiding water where these organisms live, or the complete eradication of the agent. Less radical but also effective is the wearing of boots when, for example, fetching water at the waterhole, doing the laundry in a creek and working in the rice fields.

As for the previous practices we asked the individual sample the same two questions on the principle and the actual use of boots, and we asked the observers the question on the constraints to effectively using boots. With respect to the wearing of boots: 49% of the respondents answered "yes", and 48% said "no", while 2% did not give an answer (see Table 10). Is it realistic to assume that indeed almost 50% of the TV for Everybody spectators use boots while working in the water? We doubt it. Certainly, many field laborers wear some kind of footwear, but boots are not used very frequently, because they are hot and are more expensive than the plastic sandals most commonly worn by the Ivorian peasant. It is true for example that the SODERIZ, the state company for rice cultivation and production, promotes the wearing of boots in

the rice fields, but it seems improbable to us that all the rice laborers wear them. The reason for wearing boots is rather well understood by the large majority of the respondents. Eleven percent gave correct answers, 80% provided answers that were not completely correct but that indicated sufficient knowledge, and only 8% were ignorant of why boots could be useful (see Table 9). As usual, we found that literates had a better understanding than illiterates, and men a better understanding than women. But we found no significant correlation between actual use and knowledge (Chi-Square = 2.05, df = 2, at the 5% level).

As for the reasons why villagers who work in the water do not wear boots, the observers provided the following list of replies.

1.	The villagers do not have the money to buy a pair of boots.	10
2.	There is no water around; there are no rice fields.	5
3.	They do not understand why use boots in the water.	3
4.	They understand the principle but do not see the necessity of wearing boots.	3
5.	The stores where boots are sold are too far away.	3
6.	Wearing boots while working in the water is not practical.	2
7.	They have boots for walking in the fields but not for working in the water.	1
8.	They do not watch the TV programs.	1

Again, the lack of money or the high price of the article are the most frequently cited reasons. This does not mean that people do not have money at all. Apparently boots are less valued than other

things[43].

Inciting people to wear boots, in one or two TV programs will not produce big results. A systematic informational campaign, possibly completed with a similar advertising campaign as for the water filter could be more effective.

8. Protection of Food Against Flies

The last health practice advocated in the Water Series, though again in a limited way, was the protection of food dishes against flies. Flies are very often transmitters of diseases relative to human excrement, and form an important link in the chain of contamination. Covering food dishes is certainly not a new method because one sees it practiced everywhere. This conclusion is also confirmed by the answers of the individual respondents to the question whether they covered their dishes against flies. Ninety-three percent of them answered "yes", a mere 7% "no" (see Table 10). At the same time we found a high correlation between the actual practice and the knowledge of why one should follow the practice of protecting the food. (Chi-Square = 10.18, df = 2, at the 5% level). This is not surprising when we observe that 80% of the respondents gave a correct answer to the question whether they could

(43) We conducted a survey before and after the program series on Credit & Savings at the end of the 1975-1976 school year. The results will, hopefully, shed some light on the attitudes and practices of the peasants regarding finance and budgeting.

explain the reasons why one is supposed to protect the food against flies. Eighteen percent provided a not so correct answer, and only 2% remained ignorant (see Table 9). With respect to the actual practice question, there were no differences between men and women or between literates and illiterates, while men did better than women on the knowledge question.

Though covering food dishes is a widespread practice, there remain people who do not follow it. The observers gave the following lits of reasons why villagers do not protect their dishes against flies.

1. They understand why but they do not see the necessity to cover their food. 7
2. They do not understand why one should cover his food. 2
3. If no flies will sit down on the food, it is poisoned. 2
4. There are too many flies. 1
5. They do it sometimes during big feasts. 1
6. They do not think that flies are harmful. 1
7. They do not have the money to buy a piece of material and to buy the soap to wash it. 1

The most interesting reason is the third one. But it must be a very powerful poison that kills flies instantly; and what happens if there are no flies at all? The other answers do not provide much information, but we note that even with this health method money can be a constraint.

9. Note on "Practices"

In order to complete the picture of the differences between men and women, and literates and illiterates in understanding and using certain

practices we computed the total score of each of the 108 respondents who had completed all answers on the knowledge question. We found that when comparing men (all agriculturalists) with women (all housewives) the former performed better than the latter (Chi-Square = 6.24, df = 2 at the 5% level). Literates did better than illiterates (Chi-Square = 20.13, df = 2, at the 5% level) and younger people (20 to 30 years) did better than older people (31 to 40 years) (Chi-Square = 7.32, df = 2, at the 5% level).

PART V. SUMMARY AND CONCLUSIONS

1. Introduction

The data presented in the foregoing pages are not contradictory but they do not provide a picture of a clear-cut and definite success of the Water Series either. It is not clear whether there were enough attitudinal, cognitive and behavioral changes observed to justify the resources spent on the 25 programs. Before presenting our final, though tentative, conclusions, we must discuss first why the water programs did not have more impact than they had, taking into account the limitation of the TV programs themselves, and the constraints in changing attitudes, knowledge and behavior.

In the feedback questionnaires of the 1974-1975 school year one of the questions asked to the out-of-school animator was whether his listening group had taken any decision concerning an action related to the contents of the program watched. This question was dropped in subsequent feedback forms because its answer was almost always affirmative. The animators indicated less often what kind of action had been decided upon, and in most instances the decision taken was not more than "follow the lessons seen on television" irrespective of the actual contents of the TV program. This reveals two things. First - and this is less important for our present discussion - the animators always want to make a good impression on the people in Abidjan. The second lesson is that it does not make much sense to ask the question on decisions taken when the TV program itself does not aim for any decision or action. In a descriptive

analysis of the first year of the Out-of-School TV operation(44) we found that the large majority of TV programs broadcast had only a sensitization objective. Out of a total of 52 programs only 5 tried to transmit a certain knowledge, while 15 contained an element of incitement to action besides sensitization and knowledge transmission elements.

What we observed for the 1974-1975 school year does apply, though to a lesser extent, also to the 1975-1976 season. A look at the objectives of the 25 water programs (see Appendix B) shows that 7 programs had only a sensitization objective, 2 programs were mainly meant for knowledge transmission, and 2 programs were specifically action oriented. All 14 remaining programs had a mixture of these categories of objectives in which the sensitization clearly prevailed.

In general, the effect of sensitization is an awareness or consciousness about a certain issue or situation and it is difficult to measure, although survey methods are available. We have explained that because of several constraints a proper scientific survey (using a control group) could not be carried out.

In the third survey of November and December 1975 (see Part III) we made an attempt to gather some audience reactions as we did during the site visits in the same moment(45). All in all we had to be satisfied with the interpretations of intermediary persons (the observer, the animator) of the spectators' feelings, knowledge ideas and actions.

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(44) Anthony Kaye and Frans Lenglet: Op.cit..

(45) Stephen Grant and Seye Pierre: Op.cit..

What kinds of attitude, knowledge and behavior were supposed to be changed as a result of watching the TV for Everybody programs and of participating in the discussions afterwards? As we have described the objectives included awareness raising about the existence and seriousness of water problems in the country, knowledge transmission on the principle of the water cycle and disease transmission, and instruction on how to have a well constructed, how to build a latrine, how to purchase and use a water filter, and other practical measures. Could we say that the objectives were attained? Even if they were achieved, what is their relevance for the well-being (in the largest sense) of the rural population of Ivory Coast?

2. Awareness

Despite the generality and the vagueness of the objectives of almost all the water programs, we can state that to a large extent the awareness or sensitization objective was attained during and after the two Water Series. Some of the data supporting this conclusion were presented in the previous sections. We know that the interest of the audience for the water programs was high in comparison with all the programs of the 1974-1975 season. We have the personal experience in villages that little children repeated the slogans used in two educational spots broadcast regularly during the first Water Series(46). In our discussion with out-of-school animators and listening groups many of them explained

(46) See also: Research Unit, Out-of-School Department: "L'Expérimentation de Quatre Flashes Educatives". Abidjan, May 1975.

how much they were interested in the programs and showed, for example by making a tour of all the waterholes of the village, their concern for the lack of safe water. Another proof of the awareness of and concern for water problems in the country is given by the large number of letters which arrive at the Out-of-School Department. A sample of 16 letters (see Appendix I) from the unsolicited mail in the period October-November 1975 shows that the various listening groups and villages had taken 13 decisions (or expressed intentions) concerning an action and had started 11 actions. And as a last data source we have the distribution of answers of the sample of the National Public Opinion Institute which indicate that of those urban and rural people who watch TV for Everybody 65% and 62% respectively expressed the intention to construct a well or to keep the house and the compound clean(47), as the lesson they learned from watching the television. That the interest of the audience, and as we may assume the awareness of water problems, was a continuous phenomenon, is shown by the listening figures (see Appendix F). All this leads us to the conclusion that interest for the water programs was widespread and that awareness of water problems was aroused. But does this mean that the programs had a real impact? We are inclined to speak of a potential impact. Interest and awareness are certainly a precondition for future actions. People who are not interested in or conscious of a certain issue will never become active in trying to do something about it. But interest alone is not sufficient to make the st

(47) We are somewhat suspicious these high figures, because 5% of the urban respondents and 1½% of the rural respondents say they learned about mechanization of agriculture from TV for Everybody, a subject never specifically dealt with by the out-of-school television.

towards action. There is a set of other preconditions and requirements which must be present and fulfilled before actual action can be undertaken. One of these is that once awareness is aroused it should be sustained. This can only be done through more information by using various means of communication: radio, television, press, extension agents, etc. The best of all possible situations is that where the information is self-sustained, that is, where people whose awareness has been aroused, are motivated to look actively for more information which will increase their consciousness about the issue, their knowledge about its "solution" and their "skills" for the actual solution itself. We are of the opinion that in the Ivory Coast such a self-sustained awareness is almost absent, and that little is done to support the interest for water problems and its solutions, as created by the water programs.

Since the last water program the Out-of-School Television has only shown one half hour program on the water issue which was included in the HABITAT series (March, April 1976). For the new 1976-1977 season no new water programs are scheduled. The radio and press do not devote any particular attention to the issue of a safe water supply, except for an occasional article. One could say that there is no national campaign on water, with exception of the ONPR program for hygiene education (see Part I). But as we have seen, this program is only in its first stages(48), and the training of the local animators who will be responsible for the "education" of the other villagers has not yet started.

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(48) See also: ONPR: "Rapport d'Evaluation du Programme en Hygiène Sociale pour l'Emploi de l'Eau Potable". Abidjan, March 1976.

Besides, this education program builds also upon the active participation of the sanitary assistants employed by the Ministry of Population and Public Health. The latest figures show that in only half of all Sous-Préfectures (100) there is a sanitary assistant. It is virtually impossible for them to maintain a permanent flow of health information to the most remote villages. The same is true for infrequent itinerant vaccination teams. Dispensaries and hospitals are so fully occupied by their task of dispensing medical treatment that preventive health care is virtually excluded.

The self-sustenance of the aroused awareness would be possible if an informational infrastructure were available through which the TV audience could obtain more (and more permanent) information concerning the issue of which it had been made aware. The existing political and administrative structure can certainly not fulfill this task. They are supposed to channel requests from the local level to the top of the administrative and party hierarchy, and to channel back the orders from the top. Until now, except for some individual ministries or agencies, neither administration nor party have been actively involved in the sensitization campaigns of the Out-of-School Television, and the same holds true for other objectives such as knowledge transmission and action.

3. Learning

As for the knowledge transmission objective we must conclude that for some of the TV programs it was achieved. But we should distinguish between the immediate effect, the increase in learning, and the longer term effect. We do not dispose of many data which indicate that learning

took place as a result of having watched and having discussed the TV for Everybody programs on water. There are, however, some small studies which tried to measure whether learning took place and how much.

The first studies undertaken in April and May 1975 by the Out-of-School Research Unit and the Evaluation Service tested the comprehension and the knowledge after the showing of two educational spots on unhealthy water and water filtering(49). It was shown that some learning took place, though exactly how much could not be determined by lack of pre-test indicators. The same conclusion applies to the study on the learning impact of the Guinea Worm program(50). Many respondents understood a number of elements of the program (not all), and supposedly acquired new knowledge, but it was also found that a very limited number of respondents could explain the complete disease cycle. This finding was explained by the fact that only 30 seconds of the program had been devoted to such an explanation. In the third place, we have the data reported in Part IV on the correctness of answers to questions about the principles of five health practices: water filtering, water boiling, latrine utilization, wearing boots and food protection. Lumping the scores of the answers to the different questions together we found that 33% of the respondents obtained a HIGH score, 59% a MEDIUM score, and only 8% a LOW score. Though no absolute value should be attributed to

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(49) Research Unit, Out-of-School Department: Op.cit..

(50) Josiane Jouet: "Rapport d'Enquête sur la Compréhension de l'Emissi et de l'Affiche sur le Ver de Guinée". Abidjan: Out-of-School Department, 1976.

these figures we can be confident that as a result of TV for Everybody watching some learning took place. As awareness is a condition for future action, so is knowledge. But what good does it do to have this knowledge without being able to use it? To what extent can what is learned be applied? Most of the knowledge transmitted in the Water Series was basic knowledge on the principles of the water cycle, the existence of microbes, and on water as a source of contamination. Some more practical knowledge was communicated in the programs on the water filter, the latrine etc.. Immediate skills training did not take place.

Are a small number of TV programs sufficient to have a large part of the audience acquire basic knowledge that will be retained for a long period of time? We doubt it. It seems to us that the learning of basic as well as more practical knowledge should be reinforced continuously by repeating what was learned before and by expanding the body of knowledge on the basis of what was already known. In view of the programs scheduled for the third out-of-school season (1976-1977) we believe that TV for Everybody can only contribute to this reinforcement in a limited way. In the absence of any other adult education schemes(51) it is not very likely that the basic knowledge about water related issues will improve over the next years. The major constraint to the usefulness of the practical knowledge lies in the lack of "tools" with which to

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(51) The out-of-school television is meant for the rural masses. The extension services of the various ministries and agencies are suppos (theoretically) to reinforce the TV for Everybody messages within their competence. These extension services do not reach the popul tion at large. See the detailed study of "Field Animation" by Annie Benveniste (forthcoming).

apply it. Tools are defined as all those material and organizational inputs with which practical knowledge can result in a purposeful output. The lack of these inputs was demonstrated by the many obstacles encountered in the follow-up of several of the health measures advocated in the Water Programs, especially in well construction and water filtering. Here the lack of financial resources and the absence of active administrative cooperation appeared to be one of the major constraints in applyi the knowledge obtained by watching the TV programs.

4. Action

The critical notes we made concerning awareness and learning apply also, probably with even more significance, to the last category of objectives: incitement to action, and to its result - action itself. We saw that the TV for Everybody watchers were invited to various actions: construction of a well, purchase of a water filter, construction of a latrine and organizing of a hygienic committee in the village. First we must ask the question: Is it possible, even if all necessary conditions are fulfilled, to incite the audience to so many actions in such a short period of time (13 months from Why a Well? to Water Hygiene)? Our data demonstrate that, indeed, it was possible to make the audience aware of certain problems related to water, and according to the unsolicited mail we mentioned before, there were many intentions to start an action. Thus it seems that incitement to action had some result. But is it useful to invite the audience every two or three weeks to consider another action? Is it reasonable to expect them to take a decision concerning one action, and to take another decision a month later, without having been in the position to start carrying out the first decision? It is

true that all actions advocated were geared to a better water supply but especially communal actions are difficult to start because:

- The actions need preparation, and their execution, once a decision has been taken, requires time and resources.
- It takes time, for example in the case of the construction of a public well, to convince the total village community or at least the village leaders of the necessity and usefulness of such an action. Time is needed to compose a village delegation to be sent to the administrative and political authorities for assistance. It takes time before technical aid can arrive. It might take two to three years before the request of a village for a well construction project is honored by the actual drilling operation.
- Resources must be available and must be found. Financial contributions by all villagers are difficult to collect, even when money is available. But in many instances the villagers do not have ready cash (unless it is immediately after the harvest). A credit system is only gradually developing in Ivory Coast, and up until now credit institutions have not been involved in any major way in the preparation of the various TV series.
- In theory administrative support is always available, but it arrives that the administrative bureaucracy works against village projects instead of encouraging them. (Except for the many cases in which village projects are started under the immediate pressure - and with the immediate financial participation - of village sons who reside in the capital and have contacts with crucial persons in the political and administrative structure).

Considering these reasons we would like to recommend that the Out-of-School Department limit the number of communal actions advocated and proposed in its TV programs. It will make more sense and it will be more effective when only one or two major "action campaigns" are held during the school year. To enhance the success of such campaigns, it will be necessary to acquire the active cooperation and involvement of ministries and specialized agencies concerned. We formulated this recommendation already at an earlier stage in discussions with the Out-of-School Department, and it seems as if it has been followed in the preparations to the programming for the new 1976-1977 season.

Our remarks about the usefulness of the results of the TV for Everybody programs have remained within the existing socio-economic and political framework of the country. We have indicated, to a certain extent, ways in which the effectiveness and usefulness of the program could be improved. However, one major constraint for a successful adult education project remains the socio-economic and political structure itself. We have touched on this in our comments on the financial and organizational obstacles to the impact of the Water Series. It is true that, for example, the existing credit facilities can be improved, and that the responsiveness of the administration in general and the extension agencies in particular can be enhanced. But a whole new element would be introduced if in the TV programs, as a precondition for successful impact, the need for local organization and local mobilization would be explored. Here it is not the place to present this proposal in detail. But it seems to us that a heightened awareness among the village population of the intrinsic power it has to improve their well-being

coupled with an effective locally controlled organization could result in a larger audience, a larger interest among the audience, and a larger impact in terms of successful organization and action. To a certain degree this has been realized by the Out-of-School Department. In the 1975-1976 season it launched the proposition of creating so-called TELE-CLUBS which could become the nucleus in the village around which development actions promoted by TV for Everybody could take place. In its embryonic form this could be the start of a larger social movement in which the television could play a catalytic role.

APPENDIX

APPENDIX A

ACRONYMS AND NON-ENGLISH TERMS USED IN THE TEXT

CNAD	National Committee for Nutrition and Development
DATAR	Directorate of Territorial Organization and Regional Action
DOGE	Division (of the Ministry of Education) for the Organization and the Management of Education
FRAR	Regional Funds for Rural Development
INSP	National Institute for Public Health
IP	Primary Inspectorate
ONPR	National Office of Rural Promotion
PAC	Commercial Action Program
SODECI	Ivory Coast Water Distribution Company
SODERIZ	Ivory Coast Company for the Development of Rice Production
Sous-Préfet	The Government Officer at the head of the Sous-Prefecture
Sous-Préfecture	The country is administratively divided in 24 Departments, each Department is sub-divided in Sous-Prefectures

APPENDIX B

THE 25 WATER PROGRAMS AND THEIR OBJECTIVES

(Source: Support documents for the out-of-school animators, as produced by the Animation Section of the Out-of-School Education Department)

Title	Objectives
NOT A WELL	Convince the peasants of the danger of drinking waterhole water. Convince them of the necessity of constructing a well in the village.
FIRST SERIES	
WATER, SOURCE OF LIFE	Show in a general way the importance of water and its problems in the country.
DROUGHT IN THE NORTH	Present the North in a general way, related to water and agriculture. Show the problems caused by the lack of water, and the various ways of water supply in this region.
SEA, LAGOONS, AND RIVERS	Show the aspects of water in the coastal region and the activities linked to it. Show the various ways of water supply for this region.
THE WATER SITUATION IN TOWNS	Present the utility aspect of water in the towns. Show the various modes of supply and their problems.
THE ARID COCOA BELT	Show various aspects of water and agriculture in the Central East Region. Show the difficulties with the water supply, and the expectations of the peasants for a solution.
WATER IN THE MOUNTAINS	Present different aspects of water in the mountain area. Show the ways of supply and their problems.
THE WATER CYCLE	Explain the water cycle. Have the audience understand that water can be pure or polluted according to the place where it is found.

Title	Objectives
SPECTATOR REACTIONS TO THE PRECEDING PROGRAMS	Reply to questions and remarks concerning the previous programs. Give overview of the audience reactions to the previous program.
DANGEROUS WATER	Convince audience that water contains invisible microbes which can be revealed with a microscope. Explain that some microbes cause diseases. Have the audience understand the role played by water in transmitting diseases.
FILTERED WATER	Show that the filter is the only real solution for having healthy drinking water. Explain the principle of the filter. Show that, everything taken into account, filtering water will cost less than treating diseases caused by polluted water.
DANGEROUS WATER (repeat)	See above.
WATER RESERVOIRS	Incite to constructing and improving the cisterns in the regions where it is difficult to drill a well.
IMPROVEMENT OF WATER SOURCES	Incite the peasants of those regions where at present it is impossible to have a well or cistern, to clean and improve their water sources in order to partially avoid contamination.
THE WELL	Have the public understand that, where it is possible, the well is the best solution for the water problems. Have them understand that the digging of a well must be done scientifically in order to avoid the traditional wells which dry up too often.
SECOND SERIES	
DANGEROUS WATER	See above.
DYSENTERY	Show that water contains invisible microbes which can be seen with a microscope. Explain the role played by water in transmitting certain diseases such as Dysentery.

Title	Objectives
GUINEA WORM	Inform the public about the mode of transmission and the measures which have to be taken. Show that the Guinea Worm is a social plague.
HOOK WORM	Sensitise the population about the disease, its mode of transmission and the measures to be taken for avoiding it.
BILHARZIOSIS	Same as l'Ankylostomiase.
MALARIA	Show what causes malaria which is a widely spred disease in the country. Show preventive measures.
BILHARZIOSIS (repeat)	See above.
RIVER BLINDNESS	Show that river blindness is a social plague. Show the socio-economic repercussions. Inform about its mode of transmission and preventive measures.
WATER HYGIENE	Show the important measures to take for avoiding the diseases due to water (in relationship to the previous programs).
WATER HYGIENE (repeat)	See above.

APPENDIX C

MEMBER LIST OF THE WORK GROUP FOR THE FIRST WATER SERIES (OCTOBER 1974)

1. Directorate of Territorial Organization and Regional Action (DATAR)
2. Evaluation Service of the ETV Project
3. Ministry of Agriculture
4. Ministry of Animal Production
5. Ministry of Social Affairs
6. Ministry of Youth, Popular Education and Sports
7. National Committee for Nutrition and Development (CNAD)
8. National Institute for Public Health (INSP)
9. National Office of Rural Promotion (ONPR)
10. Out-of-School Education Department of the ETV Project
11. Regional Funds for Rural Development (FRAR)

Map of Ivory Coast with the Primary Inspectorates included in the observer network

(The figures represent the number of observer villages per Primary Inspectorate)

APPENDIX E

LIST OF VILLAGE SCHOOLS PER PRIMARY INSPECTORATE INCLUDED IN THE OBSERVERS NETWORK

	1st Quest. Returned	2nd Quest. Returned	3rd Quest. Returned	74-75 Visit	75-76 Visit
I.P. Abengourou					
Agnibilékrou	X	X	X		X
Duffébo	X	X	X		X
I.P. Aboisso					
Aby	X				X
I.P. Agboville I					
Arragnié	X	X	X		X
I.P. Agboville II					
Oress-Krobou	X	X		X	X
Anno	X		X	X	X
I.P. Bondoukou					
Dinaoudi		X	X		X
Kouadi	X		X		X
I.P. Daloa					
Orgaff	X			X	
I.P. Tiassalé					
Katadji	X	X	X	X	
Bédé	X	X		X	
I.P. Bouaké					
Assakro					
Fli-Akakro	X	X	X		X
I.P. Bouaflé					
André	X	X			X
I.P. Daoukro					
Ouellé-Koumanou	X	X			X
I.P. M'Bahiakro					
Konghéra	X				
Dadiékro	X				X
Kouandikro	X		X		X

LIST OF VILLAGE SCHOOLS PER PRIMARY INSPECTORATE INCLUDED IN THE OBSERVERS NETWORK (Continued)

	1st Quest. Returned	2nd Quest. Returned	3rd Quest. Returned	74-75 Visit	75-76 Visit
I.P. Bakassou					
Toumouli-Bakassou	X	X	X		X
I.P. Séguéla					
Sifié					
I.P. Tiébissou					
Assé-Kbo	X				
Taki-Salékro	X		X		X
Molonoublé	X		X		X
I.P. Touba					
Foungbesso	X	X			
I.P. Toumoudi					
Kokumbo	X	X			
I.P. Yamoussoukro					
Angossé	X	X	X		X
I.P. Zuénoula					
Maminigui	X	X	X		
Bamoufla	X	X	X		
Zoroflo	X	X			
Zirifla	X	X	X		
I.P. Daloa					
Zagorétia	X		X	X	
Kibouo	X		X		X
I.P. Duékoué					
Kouepleu	X		X		X
I.P. Duékoué					
Diéhlio	X			X	X
I.P. Guiglo					
Bayota	X	X	X	X	X
I.P. Man					
Kandopleu	X	X	X	X	X
I.P. Oumé					
Bakahouo	X		X		

LIST OF VILLAGE SCHOOLS PER PRIMARY INSPECTORATE INCLUDED IN THE OBSERVERS NETWORK (Continued)

	1st Quest. Returned	2nd Quest. Returned	3rd Quest. Returned	74-75 Visit	75-76 Visit
I.P. Korhogo Napié I	X	X	X		X
I.P. Odienné Massadougou	X	X			
Total	37 (93%)	21 (53%)	24 (60%)	9 (23%)	23 (5

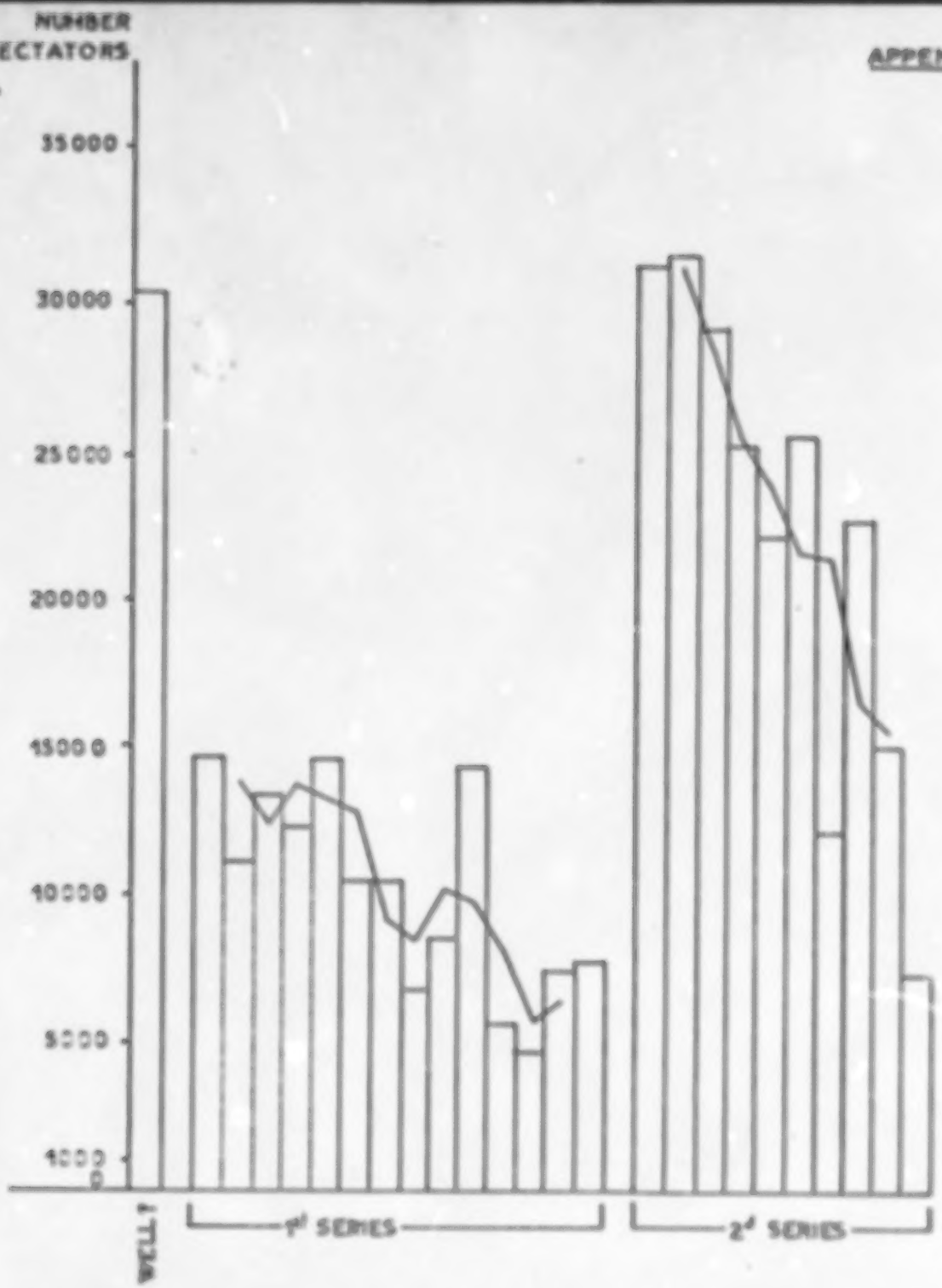
APPENDIX F

AUDIENCE FIGURES OF THE 25 WATER PROGRAMS

DATE	PROGRAM TITLE	NUMBER OF OPENED SCHOOLS	AVERAGE NUMBER OF VISITORS PER SCHOOL	TOTAL NUMBER OF VISITORS	INTEREST		
					HIGH %	MEDIUM %	LOW %
11-20-74	WHY A WELL?	449	85	30,532	83	14	3
	FIRST SERIES						
4- 9-75	WATER, SOURCE OF LIFE	318	61	15,582	68	29	4
4-11-75	DROUGHT IN THE NORTH	247	56	11,115	59	35	6
4-16-75	SEA, LAGOONS AND RIVERS	262	58	12,972	59	34	7
4-18-75	THE WATER SITUATION IN TOWNS	245	61	12,005	44	43	13
4-23-75	THE ARID COCOA BELT	265	67	14,310	58	36	6
4-30-75	WATER IN THE MOUNTAINS	212	63	10,600	56	39	5
5- 2-75	THE WATER CYCLE	204	65	10,608	73	23	4
5- 7-75	SPECTATOR REACTION TO THE PRECEDING PROGRAMS	127	63	6,350	56	27	17
5-14-75	DANGEROUS WATER	139	72	8,062	80	18	2
5-21-75	FILTERED WATER	255	70	14,280	78	20	2
5-23-75	DANGEROUS WATER (Repeat)	96	69	5,280	91	9	
5-28-75	WATER RESERVOIRS	65	66	3,445	56	44	10
6- 4-75	IMPROVEMENT OF WATER SOURCES	145	64	7,395	59	33	8
6- 6-75	THE WELL	143	66	7,979	65	31	4

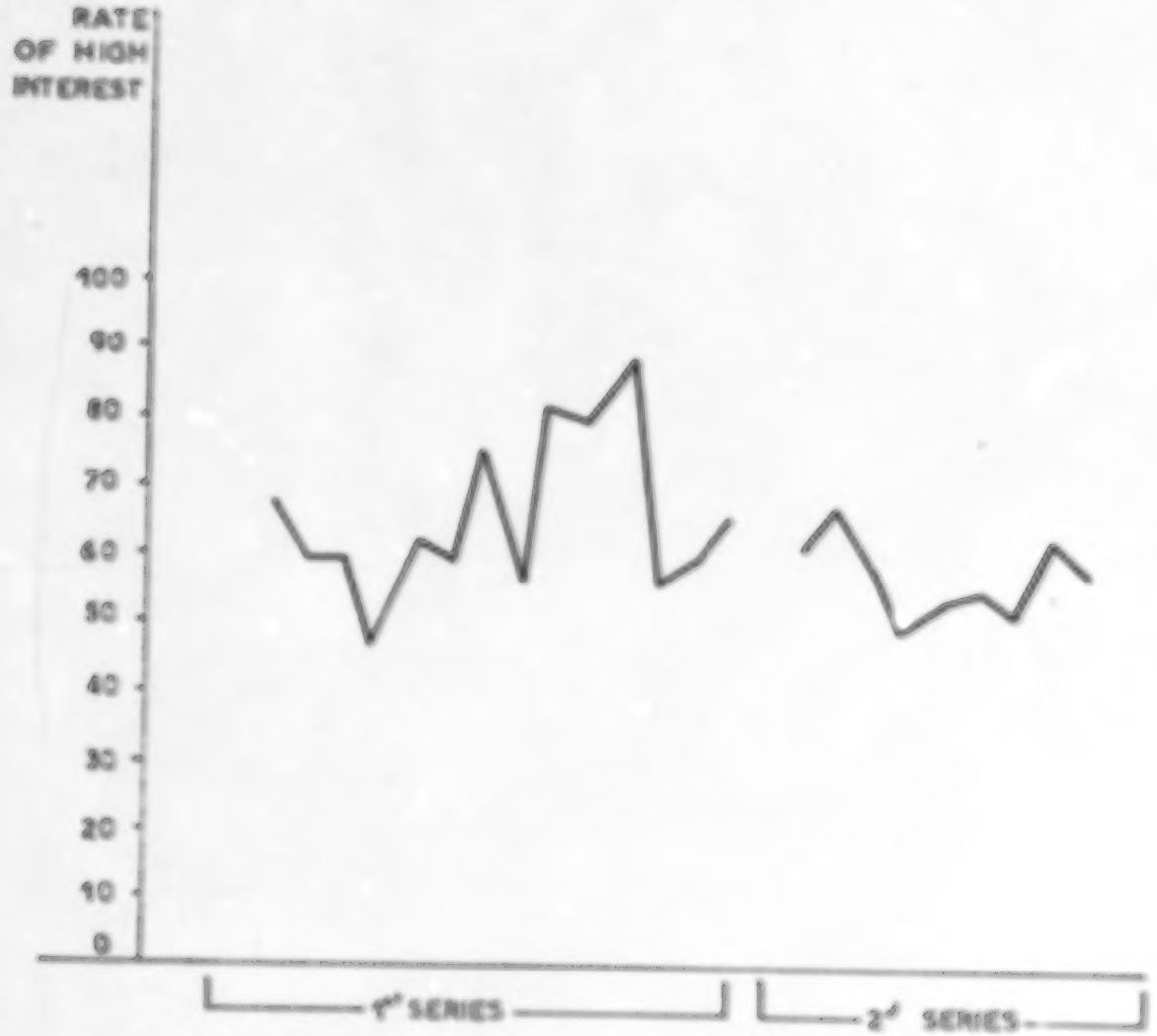
AUDIENCE FIGURES OF THE 25 WATER PROGRAMS (Continued)

DATE	PROGRAM TITLE	NUMBER OF OPENED SCHOOLS	AVERAGE NUMBER OF VISITORS PER SCHOOL	TOTAL NUMBER OF VISITORS	INTEREST		
					HIGH %	MEDIUM %	LOW %
	SECOND SERIES						
10-22-75	DANGEROUS WATER (Repeat)	548	56	30,688	61	30	9
10-24-75	DYSENTERY	548	57	31,236	70	25	5
11- 5-75	GUINEA WORM	566	51	28,866	50	30	20
11- 7-75	HOOK WORM	503	49	24,647	47	38	15
11-12-75	BILHARZIOSIS	378	56	21,168	52	35	13
11-19-75	MALARIA	494	51	25,194	55	32	13
11-21-75	BILHARZIOSIS (Repeat)	234	51	11,934	51	32	16
11-26-75	RIVER BLINDNESS	405	55	22,275	60	28	12
12- 3-75	WATER HYGIENE	270	53	14,310	55	35	10
12-10-75	WATER HYGIENE (Repeat)						



THE NUMBER AND THE MOVING AVERAGE NUMBER OF SPECTATORS FOR THE 25 WATER PROGRAMS $\left(\bar{X} = \frac{X_1 + X_2 + X_3}{3}\right)$

THE EVOLUTION OF THE RATE
OF HIGH INTEREST PER PROGRAM
DURING THE FIRST AND THE SECOND
WATER SERIES



APPENDIX I

FROM THE LETTERS OF 16 VILLAGES TO THE OUT-OF-SCHOOL EDUCATION DEPARTMENT, OCTOBER-DECEMBER 1975

13 Decisions taken, Intentions and Wishes expressed:

2 Decisions to set up Hygienic Committee to control cleanliness of the village.

2 Decisions to buy water filters (communally).

2 Decisions to construct communal latrines.

1 Wish that a health team of the "Great Diseases" (Les Grandes Endémies) comes to the village for explanation and implementation of preventive measures against Bilharziosis.

1 Intention to buy mosquito netting.

1 Intention to buy insect repellent.

1 Request help for well construction.

1 Village is going to construct a wall around the public well.

1 Decision to construct and/or improve showers.

1 Decision to improve the spring (waterhole).

11 Actions:

7 Organisations of Hygienic Committee.

1 Creation of Cleaning Committee for the area around the public well.

1 Construction of 15 latrines.

1 Construction of water tower.

1 Creation of a TELE-CLUB.